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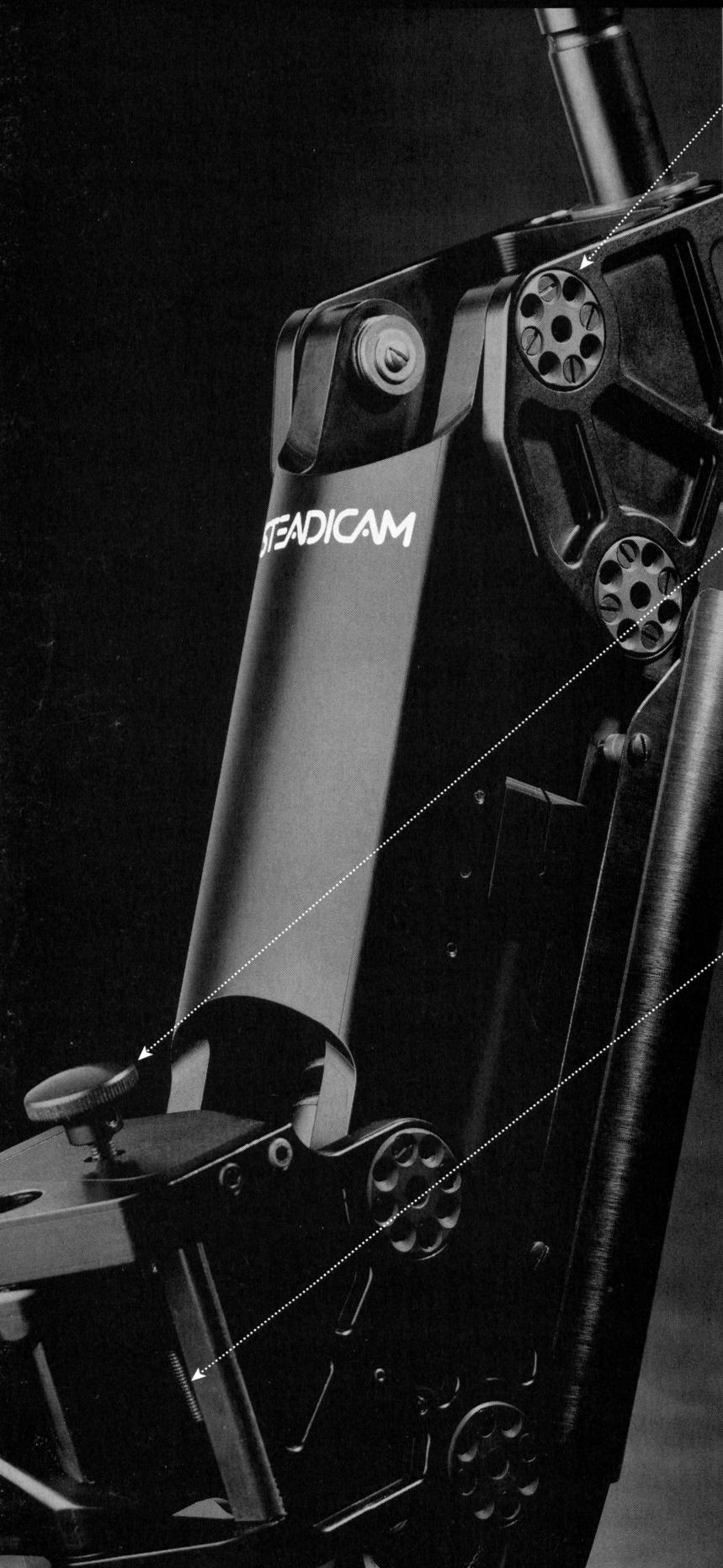
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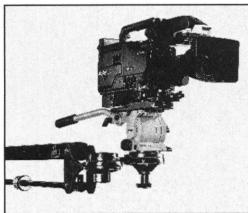
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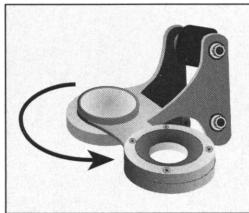
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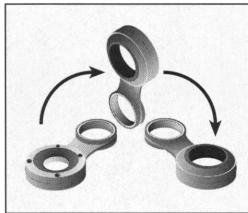
Overslung



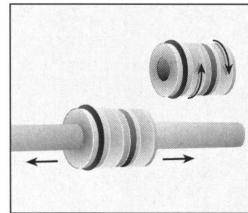
Offset Arm



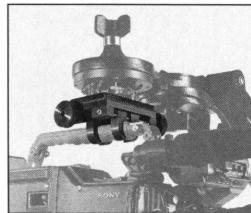
Invertible Bowl



Trim Weight

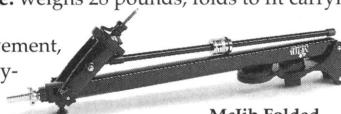


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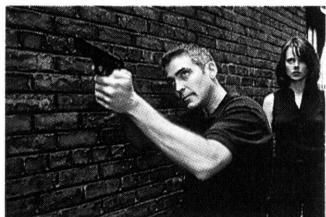
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On Our Cover: Wealthy San Francisco entrepreneur Nicholas Van Orton (Michael Douglas) is pushed to his limits by a sinister corporation in *The Game*, directed by David Fincher and photographed by Harris Savides (photo by Tony Friedkin, courtesy of Polygram Filmed Entertainment).

Contributing Authors: Bob Fisher, Jay Holben, Chris Pizzello, Christopher Probst, Andy Sobkovich, Holly Willis



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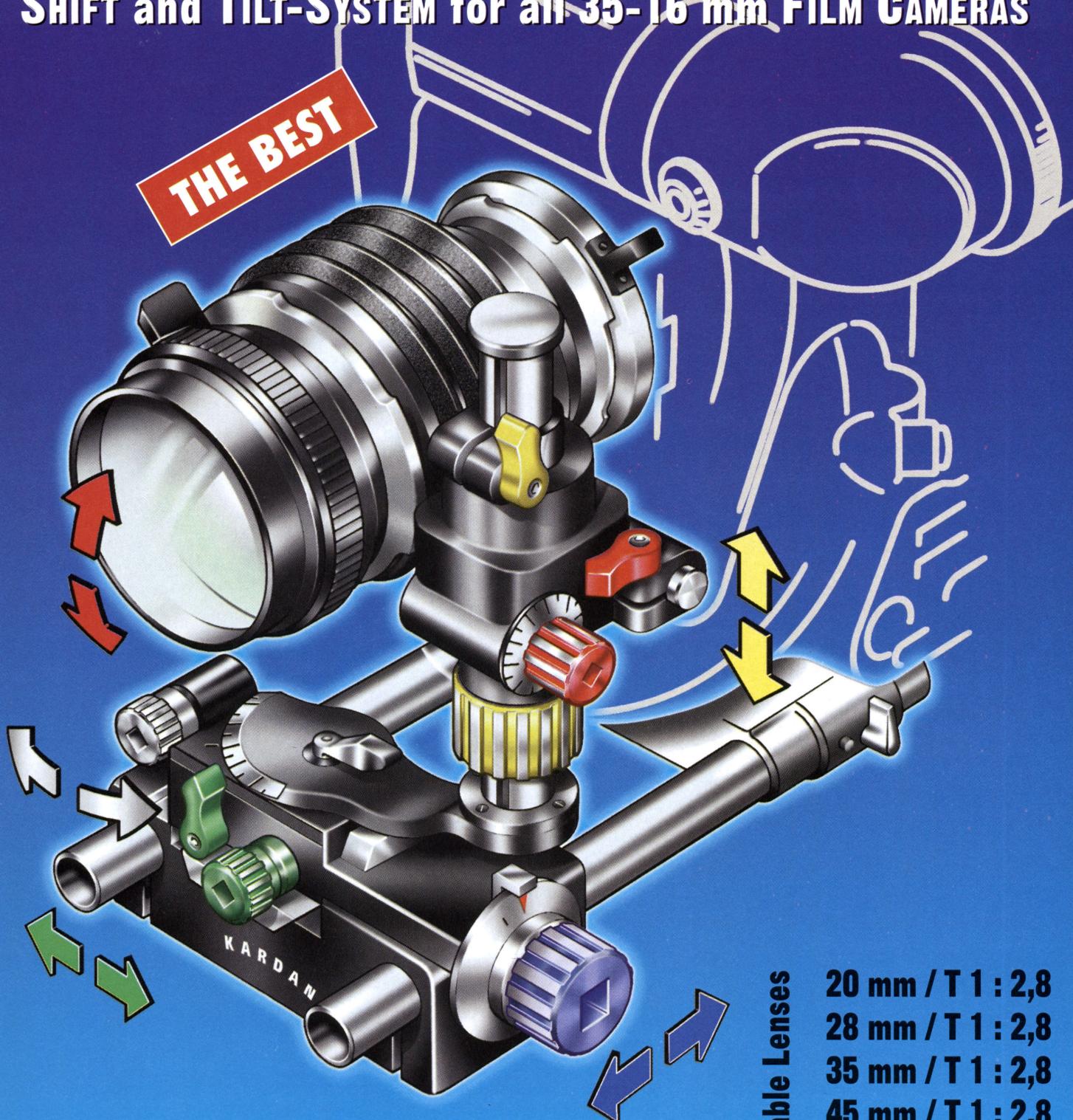
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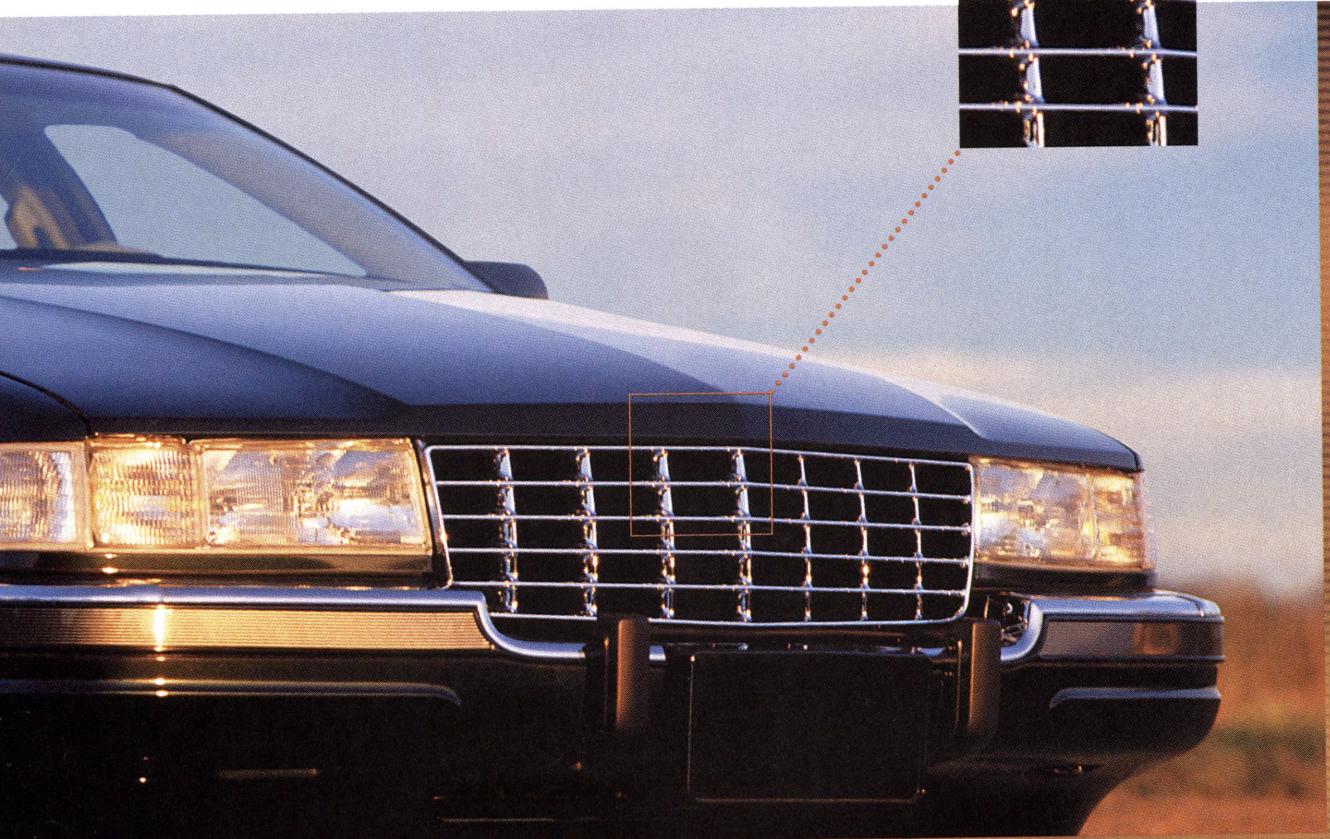
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As you can see, they're all in a PL mount. From that, you can more or less tell their size – quite small, for anamorphics. The 250mm is just over 18 inches long. The 25mm is 5½ inches.

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You can also mount three filters and a diopter, all at once, on the 25mm. Filter size is 6.6x6.6. This lens comes with two diopters. To prevent vignetting, they mount in place of the front element, which is an optical flat. With one diopter, you can focus down to 31½ inches; with the other, down to 23½ inches. You can sit in a car's back seat and shoot the driver and the passenger in the front seats.

When you change the focus with a Hawk lens, image size doesn't alter noticeably—virtually no breathing. More important, the image doesn't change *shape*. Changing focus is, in effect, changing focal length slightly, so every lens ever made breathes to some degree. But not every anamorphic lens changes circles into ovals when the focus moves. None of our anamorphics distort shapes in this way—not the Arriscopes, not the Clairmonts, not the Hawks.

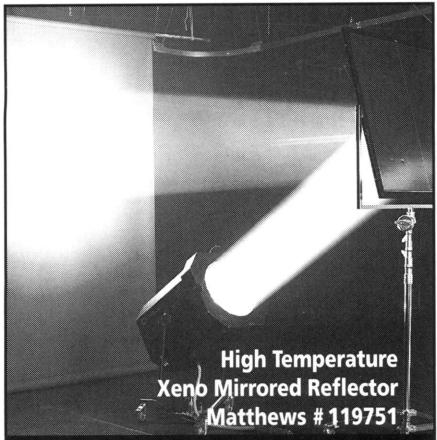
Linear distortion is very low with the Hawks, too. Not as low as the Arriscopes—but no anamorphic lens in the World draws as straight a line as those do. The Arriscopes are big and heavy for several reasons: zero distortion is one of them.

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Letters

Redeeming European Emulsions

Ron Magid's article "Fantastic Voyage" [on the effects work in *The Fifth Element*, see AC May '97] made mention of cameramen who refused to shoot Kodak's European-finished stocks because of steadiness issues. Such a general statement cannot be accepted as fact, since there is no evidence of such widespread issues.

European finishing occurs at Chalon-sur-Saône, France, where stock is received after it has been sensitized in the U.S. The finishing operations are carried out on the same type of equipment used in the U.S., and conform to the same set of specifications. This means that the pitch, margins and hole dimensions are made with the same degree of precision.

Controls are in place to make sure that product which is delivered falls within set specifications. Audits are performed on a regular basis between plants to compare products, and product is sent to camera manufacturers on a regular basis so they may set their cameras. This is the reason why a general statement that relates stories about steadiness issues cannot be accepted. Of course, there have been cases in which film has been held responsible for steadiness issues, but this occurs in both European and U.S. plants. We keep a record of all customer complaints, and steadiness issues are *not* the primary source of customer reactions.

— A. Enon
Manager
of Technical Services
Kodak, European Region

Rapping Wrap Shot

The "Wrap Shot" article in the July issue [on the 1966 *Batman* feature film] states that Mr. Howard Schwartz "was observing the action from the top of a ladder, plotting a shot for his blimped Arriflex camera." We're afraid

you have made a mistake: the camera depicted in that picture is none other than the Mitchell BNC 35mm blimped camera, which we have sold to many customers over the past 65 years.

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North Miami Beach, Florida

Errata

In the July issue's historical article on *Rebecca*, it is stated that the producer of *Intermezzo*, David O. Selznick, "was displeased with the close-ups of... Ingrid Bergman, and replaced [cinematographer Harry] Stradling with Gregg Toland."

The late Stradling's friend and longtime operator, Gerald Perry Finnerman, ASC, has disclosed to AC that this was not the case. Actually, Stradling requested leave so he could accept an invitation from Sir Alexander Korda to photograph a picture in England. ◆

Next Month in AC:

U-Turn

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Cinematographer:
Robert Richardson, ASC

L.A. Confidential

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Curtis Hanson
Cinematographer:
Dante Spinotti, AIC

The Ice Storm

Director:
Ang Lee
Cinematographer:
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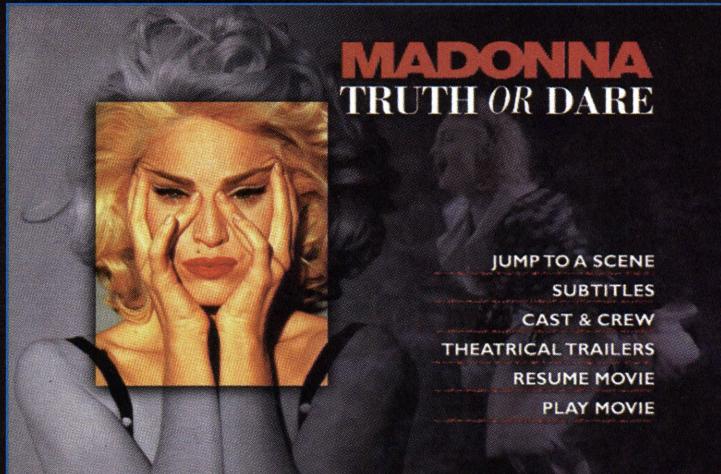
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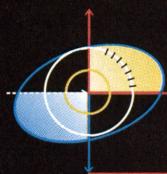
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The Post Process

Aliens, dinosaurs, spaceships and explosions may be the most celebrated showcases for digital technology, but computers offer much more to cinema than just a handy means of creating spectacular effects. Perhaps the most unsung use of the technology is digital restoration, in which every single frame of a classic motion picture is electronically polished back to its original sheen.

The full value of this application may finally be appreciated now that LaserPacific Media Corporation has completed its digital restoration of *Gone with the Wind*. The restoration was the work of the company's digital visual effects and graphics department, which is helmed by Jerry Hogreve, the former head of the San Francisco digital effects facility Clear Light Studios.

Since its opening, according to LaserPacific executive vice president Leon Silverman, the department has expanded to six full-time artists and five SGI workstations running Flint, Cineon, Alias Power Animator, Composer and Pandemonium, as well as Macintosh platforms running After Effects, Illustrator and Photoshop. The new unit got a workout on *Gone with the Wind*, since Warner Bros., which is remastering the film for home video and DVD release, is taking the job quite seriously. Each 35mm camera reel took 2½ weeks to transfer from negative to DCT at a Warner Bros. in-house telecine suite. Because the work was so painstaking, the transfer stage was ongoing even while LaserPacific was halfway through the digital restoration process.

LaserPacific received D-1 dubs of the DCT tapes, which a team of three artists then carefully restored, one frame at a time, over a four-month period. Most of the problems were predictable: dirt, chemical stains, scratches, color fading, and misaligned splices. But *GWTW*, which was shot in three-strip Technicolor by Oscar-winners Ernest Haller, ASC and Ray Rennahan, ASC, also presented some other, less typical challenges. In a few cases, Hogreve reveals, the restoration team found misalignment of the three color layers in the actual photogra-

phy. More widespread, he says, was shrinkage of one of the original elements. "As a result, the internegative we're working from had slight misalignments caused by the layers shrinking slightly differently," he explains. "We're

LaserPacific Restores Luster to *Gone with the Wind*

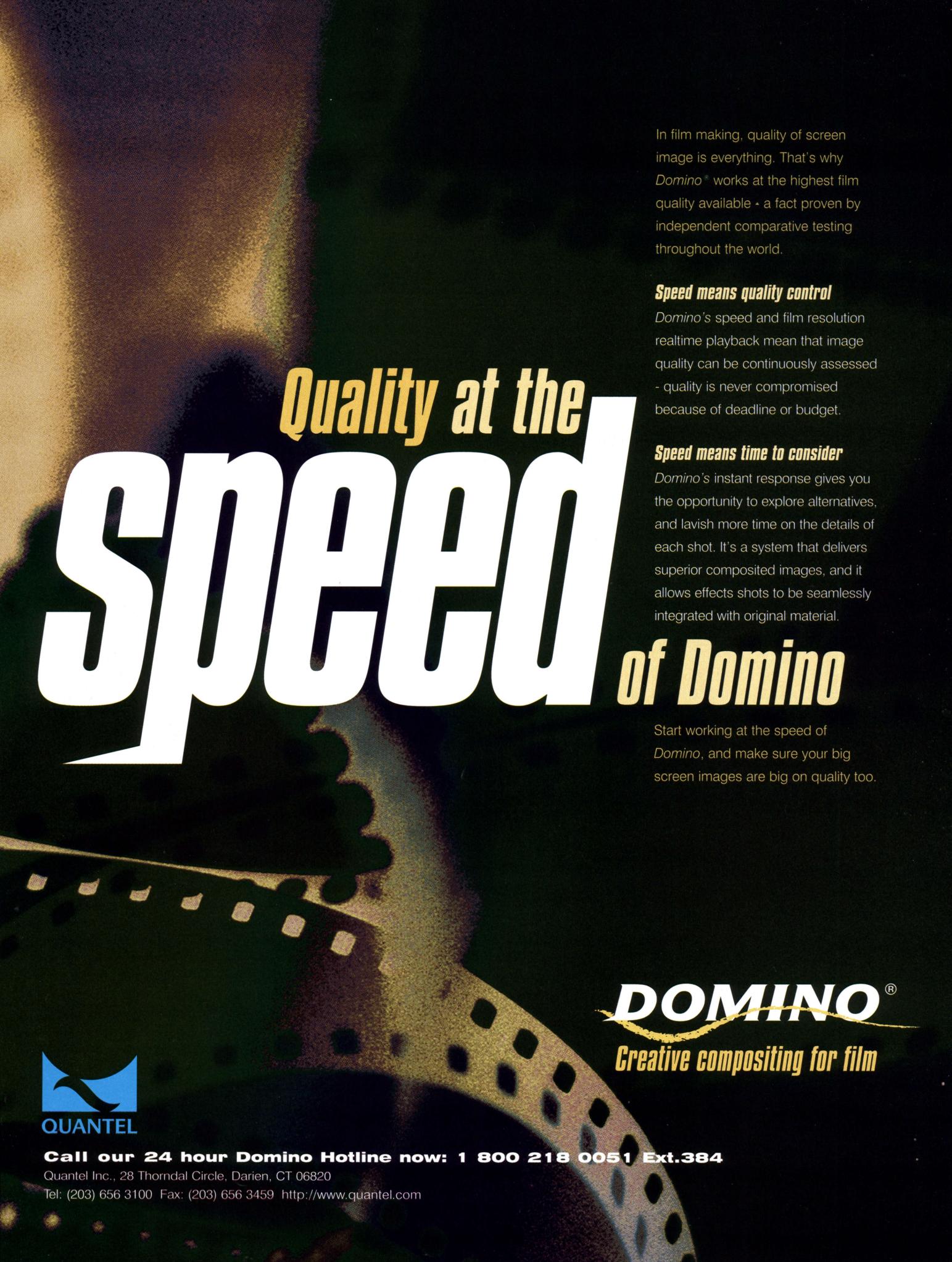
by Debra Kaufman

handling that in Cineon, which has a tool that allows us to isolate the color layers and adjust them, a pixel at a time."

Another problem was distortions in the frame after a misaligned splice. According to Hogreve, *GWTW* presented numerous occasions where the splice was so badly misaligned that the printer emitted a foreshortened part of the following frame. In one scene, for example, the necks of two Southern belles at a ball were comically lengthened after the jump of a misaligned splice. Although the facility hadn't completely resolved the issue at the time, Hogreve believed that Cineon would likely provide a solution.

Hogreve and his team also relied upon Discreet Logic's Flint software for the *GWTW* restoration. "Flint is a little easier to use as a roto tool," Hogreve maintains. "Cineon's strength is its ability to detect problems on an automatic basis. You can build parameters to detect a defect like white dirt, and it will automatically build hold-out mattes. You can then set up ways to fill [those spaces]."

Gone with the Wind isn't LaserPacific's first digital restoration project; the facility's initial foray into the realm was its creation of 16:9, 1.33:1 and letterboxed versions of *Giant* (see AC



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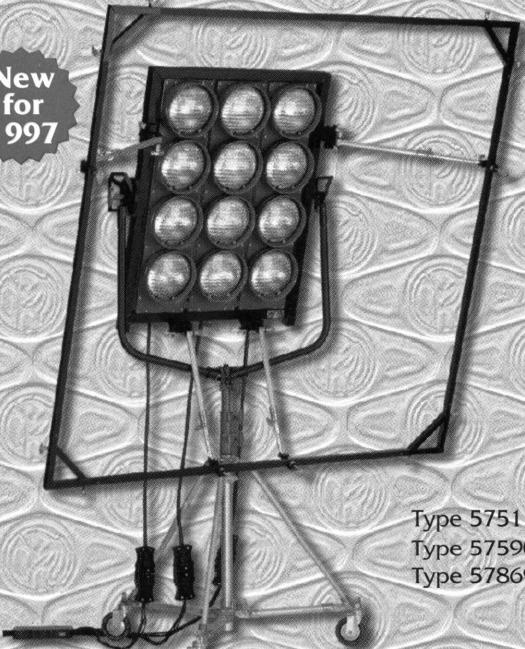
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Oct. '96). LaserPacific was awarded *Giant* after Hogreve completed a three-minute test for Warner Bros. director of video operations Ned Price, who was impressed by a side-by-side comparison of the digitally restored test footage and the unrestored version.

Two people worked for six months to restore *Giant*. One particular scene proved to be the most challenging: an interior night scene in which the camera panned over a dancing woman in a red dress. With the moving camera and the moving woman, the digital restorers couldn't "clone" from frame to frame, pulling pixels from one scene to repair the next. "We literally had to repaint the scene," reports Hogreve. "The fine-art background of our digital artists really came in handy."

Indeed, the LaserPacific team inspects even the tiniest detail, such as the form of a shadow and how it changes during camera movement. Hogreve and Silverman maintain that this sort of meticulous standard is what distinguishes a digital restoration facility. However, Silverman is quick to emphasize that his firm's job is "to digitally fossilize what the creators intended — not to change it, but to be faithful and accurate."

Hogreve reveals that LaserPacific has more digital restoration jobs in the offing. In fact, as studios begin to transfer their movie titles to DVD, facilities such as LaserPacific are sure to stay busy returning each frame to its original condition.

Restoration is only a portion of what LaserPacific's digital visual effects and graphics department is up to, though. Other recent jobs have included visual effects supervision, effects design, and 2-D and 3-D effects for the HBO series *Perversions of Science*; more than 40 shots, including digital character designs, for the Nickelodeon pilot *Strange Ways*; and 148 shots for the feature film *A Kid in Aladdin's Palace*. The department is also designing DVD menus and interfaces featuring moving video and animation for *Terminator 2*.

Still, while designing digital aliens and spaceships may be more trendy, nothing beats a good restoration job, especially when it's *Gone with the Wind*. As Silverman concludes, "We're very proud to have been entrusted with this iconic masterpiece of American filmmaking." ♦



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Production Slate

compiled by Andrew O. Thompson



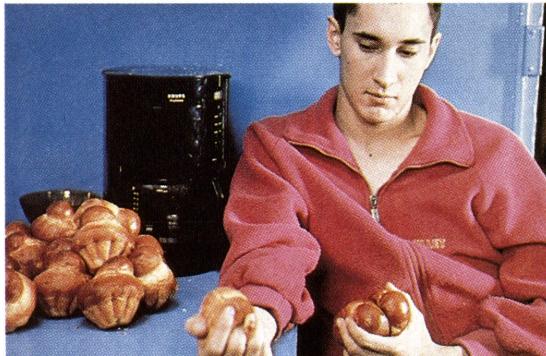
Above: An overhead shot of *Nénette* (Alice Hour) gliding along a swimming pool's surface. Offers director Claire Denis, "Even with a film like this — a low-budget movie shot on location — I'm very interested in working with color. The blue [monochrome] starts with the element of water from the swimming pool; I decided to oppose this with other strong colors like red and purple so that *Nénette* and Boni wasn't completely blue. Right: Boni (Grégoire Colin) caresses some brioche while daydreaming about the buxom wife of the local baker.

Nénette and Boni Exposes Brother-Sister Bond

by Andrew O. Thompson

Nénette and Boni, the new feature from French filmmaker Claire Denis, offers interesting insights into brother-sister relations by probing the rapport between the estranged siblings of its title. "There is a secret mystery in the relationship between brother and sister; it's a very strong and carnal relationship, but also a completely distant one," observes the director. "As a teenager, I read Jean Cocteau's book *Les enfants terribles*, which is about such a relationship, and it made me think that you would never have this 'mystery' with anyone else."

Last year's Best Picture recipient at Switzerland's Locarno Film Festival, *Nénette and Boni* is being distributed domestically this month by Strand Releasing. In this lyrical film, the brash, 19-year-old Boniface (Grégoire Colin) idles his days away toiling at a local pizzeria and engaging in elaborate onanistic fantasies about the local baker's rather bounteous wife (Valeria Bruni-Tedeschi). His routine is interrupted by the arrival of his headstrong, 15-year-old sister,



Antoinette (Alice Hour), who has escaped from a boarding school. The pair's mother has recently died, and both are alienated from their absentee father, Felix, who later surfaces to offer unwanted support. Reluctantly, Boni gives his sibling shelter, only to discover that Nénette is some seven months pregnant. The indifferent brother and sister soon find themselves facing the inevitable responsibilities of premature adulthood.

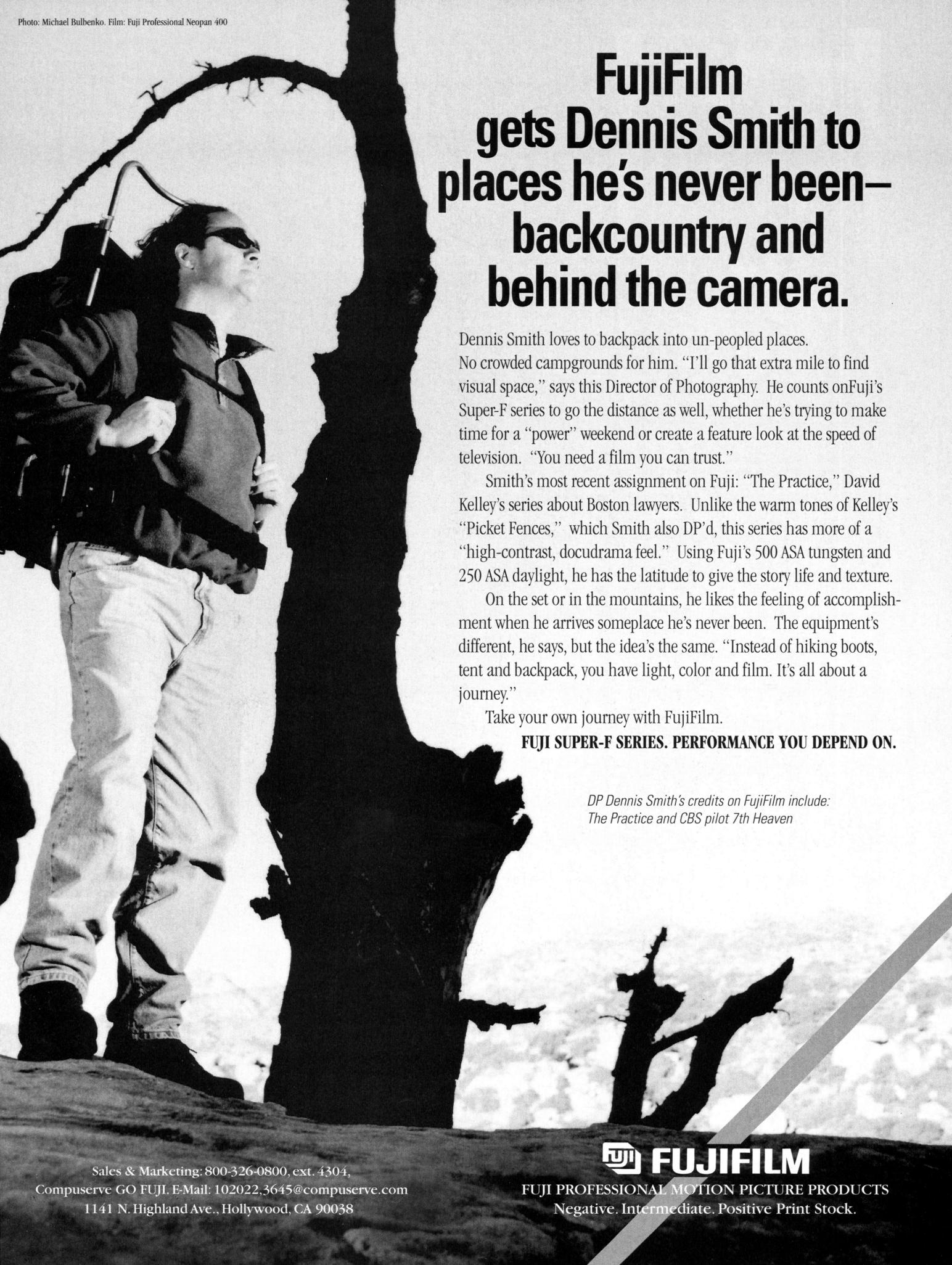
Denis and her longtime cinematographer, Agnès Godard, AFC, take an instinctive, organic approach to cinema which forsakes on-set rehearsals with actors in favor of improvisational shot blocking, and the duo often includes test footage as part of the finished film.

During preproduction discussions, the director emphasized that the camerawork should convey the siblings' aloof familiarity, seen primarily from Boni's perspective. "I told Agnès that if I could, I'd like to go under the skin [with the photography]. So we chose a close-to-the-skin framing style with more close-ups than usual in order to create physical intimacy with Boni. Then, we could accept that the difference between his reverie and reality was not clear."

Denis and Godard first met in the early Eighties, although at separate times the duo had studied at the prestigious Parisian film school IDHEC (the Institut des Hautes Etudes Cinématographiques). After their respective

graduations, both began the upward climb through the crewing ranks. Denis served as an assistant director for acclaimed filmmakers Wim Wenders, Jim Jarmusch, Constantin Costa Gavras and Jacques Rivette. During Godard's progression from focus puller to cinematographer, she operated for such distinguished cameramen as Sacha Vierny; Henri Alekan; Robert Alazraki; and AFC members Denis Lenoir and Darius Khondji.

Godard served as the camera operator on Denis' noteworthy directorial debut, *Chocolat* (1988), a French Colonial-era piece shot in Cameroon, and her later feature *No Fear, No Die* (1990). Since then, Godard has also assumed lighting duties on Denis' documentaries, TV work and features, including *Jacques Rivette: Le Veilleur, Keep it for Yourself, I Can't Sleep*, which won a Special Jury Prize at the Image Festival at Chalon-sur-Saône; and *U.S. Go Home*, which earned Best Photography honors at Italy's 1994 Turin Festival. Godard's other feature



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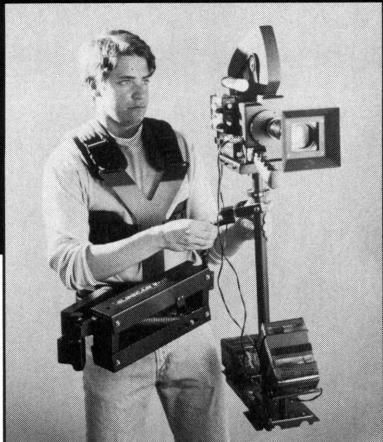
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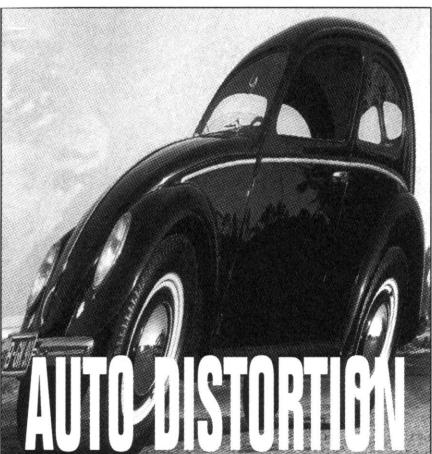
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The cinematographer filmed *Nénette and Boni* in Super 16 with an Arri SR-III. The lightweight camera aided the speed and mobility of her intimate, handheld shooting style. The finished film, however, would be blown up to 35mm, so Godard utilized Zeiss T2.1 lenses sized for 35mm photography — primarily the 40mm and 100mm — because such long lenses have greater focal depth in the Super 16 format. "Cinematography is more difficult with Super 16, because the negative is smaller," notes Godard. "There's also the problem of grain, which I wanted to avoid in order to maintain the idea of being so close to people's skin. What's funny about a 35mm blowup is that you gain the detail and brilliant transparency missing from a Super 16 positive, which is always *dull*."

In her mind's eye, the director envisioned *Nénette and Boni* as a series of images chock full of vibrant colors which would accentuate surface textures, particularly when coupled with the intimate compositions and 35mm blowup. In formulating a base palette, Denis instructed set designer Arnaud de Moleron to contrast blue and pink, shades traditionally indicative of, respectively, masculinity and femininity. Blue hues are apparent in the film's opening shot — an overhead vista of Nénette's head floating lazily along the surface of an indoor swimming pool — and can also be seen in various areas within the siblings' home. Says Godard, "The kitchen was already blue when we entered this house, and we decided to keep it. As for other spaces, like the mother's room, Claire had a precise idea of what color she wanted. The house was supposed to have been owned by Boni's mother, who was young in the Seventies, so Claire wanted the kind of saturated colors belonging to this period."

Conversely, shades of fuschia, red and pink overwhelm the bakery, and the baker's wife, to create an inviting ambiance that alternates between the brother's fantasy world and reality. "Boni's mind is always switching between being a teenager and an adult," explains Denis, "but I didn't want his dreams to be designed one way and his reality another. Let's say that the bakery

is reality: the fact that it's so pink could also make it a very sweet vision of the baker's wife, like in the films of [New Wave pioneer] Jacques Demy [*Umbrellas of Cherbourg*]."

An interesting camera trick enhances the climax of one of Boni's fantasies: from his perspective, rows of wavering golden lines fill the frame, fading in and out of intensity. The ceasing of the effect — which was preconceived by Denis — signals the end of Boni's dream. Godard states, "That idea was inspired by these special French shutters called *percienne* blinds, which are metallic and have small holes on the top. Sometimes when you are in the city, a car's headlights will create that effect [when the beams pass along the blinds] — creating an abstract shape that's moving, and going from light to dark. Claire wanted an almost mental representation of that, so I just placed two lights [a pair of 500-watt sodium-vapor bulbs] behind the shutter, and moved them around to create the effect."

While filming the house interiors — which were rendered on Eastman Kodak's 7297 stock — the duo made sparing use of HMI and tungsten fixtures; the director "wanted the house to be like a womb, since there is the mystery of what's growing in Nénette's stomach." Scenes in the kitchen, for example, were shot with one Chinese lantern and three Balcar neon tubes (of 1K or less).

Both Denis and Godard had previously used Balcar fixtures for still photography. To achieve a glow for the intimate skin-surfing shots — such as those which explore Boni when he is alone in his bedroom — Godard would position a Balcar near to the body part in shot. She expounds, "When filming the nearly naked Boni in his bedroom, I wanted to give the audience the sensation that by seeing him they would like to touch him. It's intimacy, though, not voyeurism. I wanted a simple source because it's easier to find the right angle for the light. I also needed mobile lighting because I had to spend more time trying to frame the shot in harmony with the actors."

Principal photography on this \$2 million film took place in Marseilles from December 1995 to January 1996. The city's proximity to the Mediterranean border, and the sun's low position on the horizon during the winter, provided a

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golden luminosity during clear daytime skies. Godard maximized this warm aura with Kodak's 7245 stock, which she pushed one or two stops — for saturated colors and greater contrast — depending upon weather conditions and the requirements of the scene.

Despite Marseille's brilliant ambiance, the filmmakers opted against any panoramas of the metropolitan skyline, save for a short pan prior to Boni's hospital visit to see the birthing Nénette. Denis, who has shot each of her films on location, explicates, "Marseilles is a city I really like to photograph, but because I was so into Boni there was no space for it in the film. I told Agnès that we were not going to illustrate Marseille at the expense of Nénette and Boni's story." Godard concurs, adding succinctly that "the main landscapes were the faces of the actors, and these were *infinite* landscapes."

Almost all night exteriors were shot with practicals, namely sodium-vapor street lamps (ranging from 1 to 3K in power) which emanated an orange glow. Denis desired a darkness highlighted only by a sodium/neon haze so that "Nénette and Boni would be like two children lost in the darkness." Godard, who photographed these scenes on 93 pushed one stop, reports that "this omnipresent sodium is very strange. At night, the entire city seems to be layered with a yellow cloud, and Claire really wanted to capture that in the film. We chose each location in regard to its natural light, and any sodium lights that I added from our lighting equipment would fall naturally [to mimic the glow cast by the streetlamps].

"In the beginning of the film, when Boni and his gang are stealing [contraband] to put in the pizza truck, there was maybe 20K [worth of sodium-vapor lights] around the area. I used a different cocktail of gels — yellow, orange and green — in front of normal lights to work off of the sodium. How I found this sodium color depended upon the lights we were using; the sodium lights of French cities can read very green, but sometimes I wanted a more brownish golden tone, so I would just add orange or green gels."

Denis and Godard plan to team up again this winter on an as-yet-untitled feature about a Legionnaire soldier; the film is to be shot on location in the East

African nation of Djibouti, a former French colony. Says the cinematographer, "In working with Claire, I've learned to have confidence in my intuition. That's very important, because when I arrive at a location, I always look around and try to understand why it has been chosen and what the proper ambience will be. I always work from reality, so when I see lighting in a movie that's perfectly right [for the scene], I'm very happy, because then cinema is truly *there* for me."

The Trials of Room 103 by Holly Willis

In recent years, the Czech Republic has been touted as a haven for high-end feature films in search of a low-cost European setting. The recently balkanized locale proved equally receptive and inspiring, however, to Los Angeles-based independent moviemaker Stephen Berkman, who set his most recent short in the city of Prague.

The film, titled *Room 103*, follows the travails of a novel writer who has retreated to Prague, where he becomes increasingly disturbed while reading Franz Kafka's *The Trial*. With the book in hand, the rather paranoid fellow strides through the labyrinthine streets of the Old World city, only to discover that his life has begun to mirror that of Kafka's ill-fated protagonist.

Though this nine-minute work offers an archetype for producing a high-quality short film in a foreign country on a limited schedule and tight budget, Berkman never intended to set an example. Indeed, when the director traveled to Prague in the spring of 1996, his resources were limited to his short script, a Bolex camera, and the three weeks he had to experience the city. *Room 103* gradually evolved into a 35mm project as Berkman encountered the beauty of Prague and realized that his story and the city were a perfect match. "When you're [in Prague], you feel like the ghost of Kafka is walking the streets. The buildings and architecture have this nightmarish quality that really captures you."

Mindful of the limitations presented by the language barrier and his budget, Berkman began checking out crew and equipment options. After looking at several cinematographers' reels, he selected Miró Gabor (*Mnaga, Happy*

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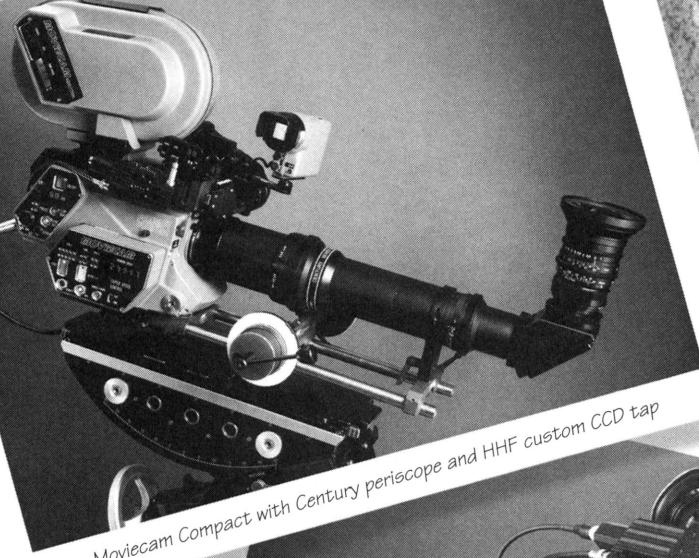
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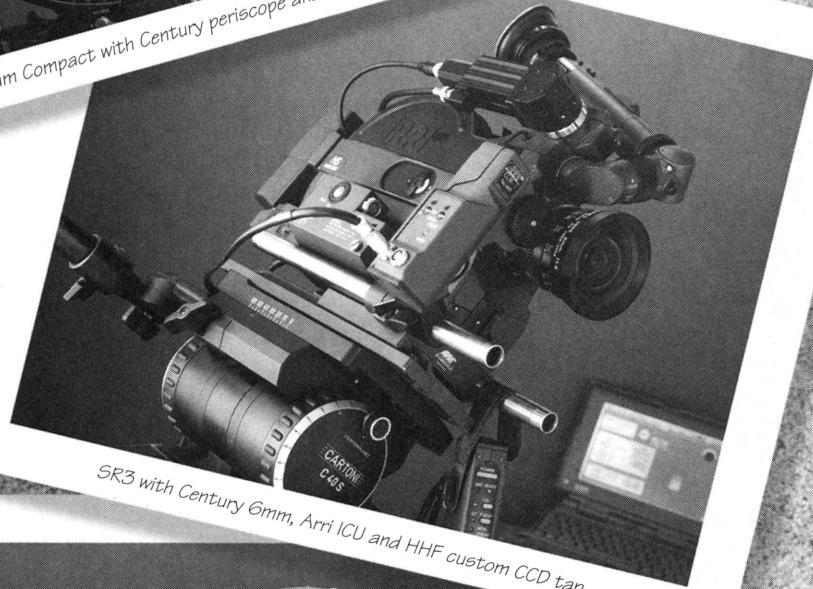
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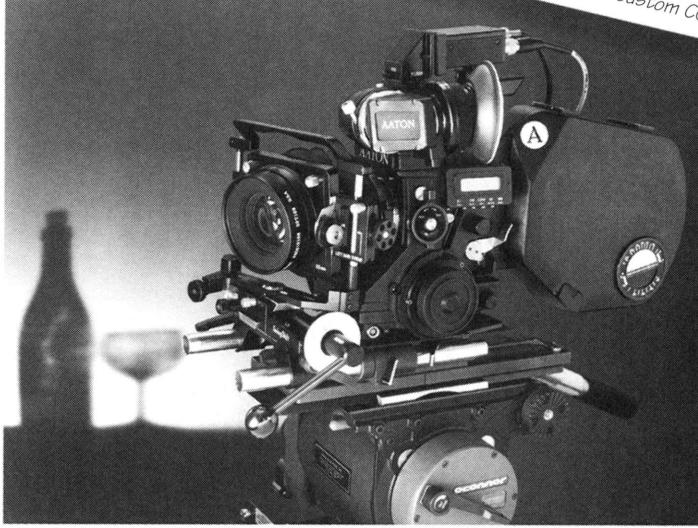
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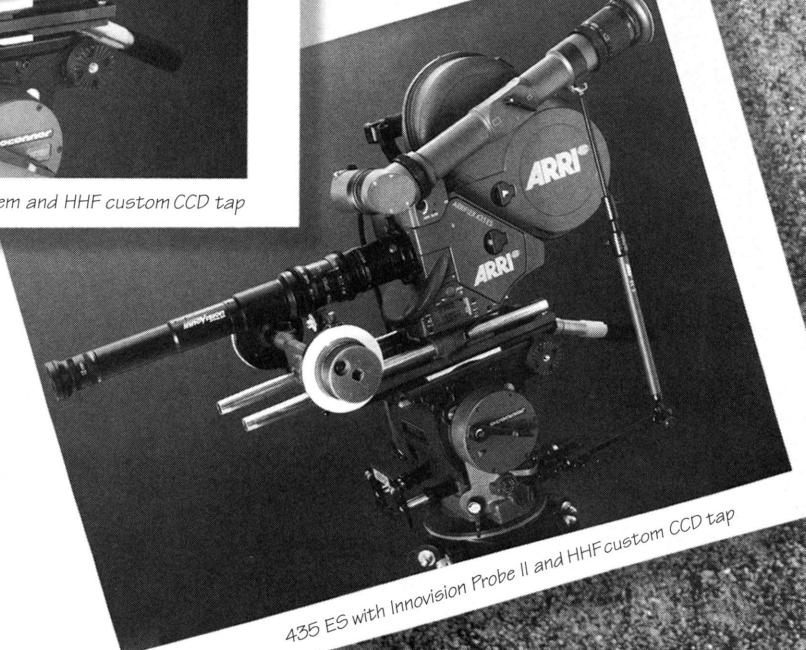
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End, The Twerps), a graduate of Prague's respected FAMU film school whose delicate use of light and tone seemed perfect for the project. "I reacted on an emotional level to Miró's work," says Berkman. "I found it subtle and evocative of painters I admire, such as [the 15th century Spanish artist] Velázquez. It also didn't hurt that he spoke English."

Berkman found that almost all the equipment he needed could be obtained from Barrandov Studios, a massive studio just outside of Prague which offered sets, props, costumes, stages, and equipment rentals. The filmmakers shot *Room 103* with an Arri BL-3 outfitted with a set of Zeiss prime lenses. "The Arri was chosen partly for economic reasons, and partly because of its compact configuration," says Berkman. "The film magazine's placement allowed us to shoot handheld in tight spaces, such as the interior of a taxi cab."

Berkman also made the key decision to rent a Steadicam from Czech TV, rather than trying to use a dolly. The director explains, "The Steadicam seemed more appropriate because of the nature of the streets, with all their cobblestones and uneven surfaces; it also freed the camera and helped create a sense of seamlessness which mirrors the character's point of view as he's walking through all these spaces."

Berkman incorporated nearly 30 different locations in *Room 103*, and used his scouting trips to have one-on-one conferences with Gabor. "Through the process of working together and roving through the city," says Berkman, "we came to an understanding of what we were looking for — namely, a very raw style with bold lights and darks, and strong, graphic compositions."

One of the duo's prime visual influences was Russian photographer Alexander Rodchenko, whose work is filled with extreme angles. "I also created scenes to work with the locations I discovered," the director continues. "For example, while scouting the hotel location that opens and closes the film, I found a phenomenal bathroom at the Hotel Europa." He exploited the bathroom for an attention-grabbing transitional shot: as the main character leaves his room to visit the restroom, he finds it occupied by the hotel manager and a nude chambermaid. "This scene motivates the character to leave the hotel,

and sets up a feeling of tension and intimidation that will follow the character through the city," Berkman submits.

Production took place with a very small crew over four days, during Berkman's final week in Prague. "We had about 170 setups," he recounts. "That's about twice as many shots as you would normally have for a nine-minute film, but I wanted a quick editorial style that would create the sensation of being lost in a labyrinth."

Exteriors were shot solely with Prague's typically overcast light — a nice bit of cinematographic luck. Berkman eschewed lighting and grip equipment in order to maintain a quick shooting pace and easy mobility. Although he had permits for all of his locations, the director found that filming early in the morning avoided the potential hassles of crowded streets and too much commotion from locals.

The opening sequence — which Berkman shot with cameraman Tim Glass after returning to Los Angeles — uses a voice-over and a series of extreme close-ups to explain why the frustrated writer finds himself in Prague. These close-ups were also shot with an Arri BL-3 (borrowed from cinematographer Guillermo Navarro) through a 100mm macro lens lent to Berkman by Otto Nemenz. The lens nicely captures a short focal plane, leaving the rest of the shots in blurred obscurity: a pen scratching letters onto paper is rendered huge on the screen, while an equally immense beetle scuttles past a pair of spectacles.

Using mostly short ends donated from music video director Tarsem, Berkman shot the film on Kodak color negative stock: 5293 for exteriors and 5298 for interiors. "Even though the film was always intended to be black-and-white, I shot on the color negative which had been given to me. In video, it is quite simple to transfer the film without color and create a convincing black-and-white quality, but for film festivals, I needed to have a 35mm print. I did some initial tests on various print stocks at Cinema Research Corporation, and I was knocked out by 5269, a high-contrast print stock used for titles and optical shots. Since it is a pan stock, it didn't add grain to the image, and although the stock provided the high-contrast quality I like, it still maintained enough detail in the mid-range. I found that the print had an actual

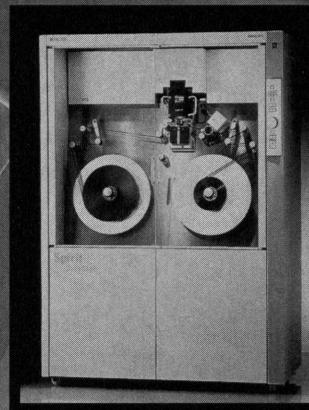
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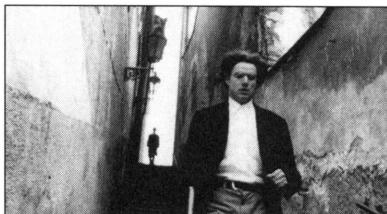
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Images of a paranoia-plagued Prague fill Room 103—primarily photographed on Kodak's 5293 and 5298 color stocks and printed on 5269, a high-contrast monochrome print stock used for titles and optical shots.



tactile quality, and it communicated the texture of Prague."

The final shot of *Room 103* offers a jolting shot of a huge beetle writhing in the writer's bed. Berkman created the effect by using a bluescreen to composite two shots. "I felt the film would hinge on this shot feeling realistic, since it is the final punchline. The shot was composited on the Flame at Pacific Ocean Post (POP), where they were able to drop in a shadow which added a degree of realism to the image." The director adds that "POP was extremely supportive of the project, and worked with my minimal budget to accomplish maximum results."

Room 103 has played in various festivals, including the Seattle International Film Festival, and will screen this month at L.A.'s American Cinematheque, Seattle's One Reel Festival and at the Athens International Film Festival in Greece.

A Real Yet Surreal *Sunday* by Eric Rudolph

The first dramatic feature from writer/director Jonathan Nossiter, *Sunday* captured the Grand Jury Prize for Best Dramatic Film at this year's Sundance Film Festival. The picture offers a striking visual tactic, mixing a kaleidoscopic array of color temperatures with wild abandon. To ground this irregular lighting approach, Nossiter and primary cinematographer Michael Barrow (*Heavy, Caught*) sought a realistic look for their slice-of-life take on a group of struggling, unglamorous residents of Queens, New York.

The story focuses on Oliver (David Suchet from PBS' *Poirot* series), a recently downsized, middle-aged IBM executive who awakens in a men's homeless shelter, incredulous that his once-prosperous life has hit such a low

point. While out on an aimless Sunday stroll, he encounters the attractive, similarly middle-aged Madeleine Vesey (Lisa Harrow from *The Last Days of Chez Nous*), a down-on-her-luck British actress whose desperation leads her to mistake Oliver for a prominent film director. The somewhat bemused Oliver goes along with her fantasy, leading to a series of complex and disquieting incidents.

Nossiter (whose credits include the documentary *Resident Alien*) drew the unusual look of the 35mm independent feature from a dense file of color stills he had taken in Queens over many years. The eastern end of this borough — where most of *Sunday* takes place — is characterized by a worn-looking assemblage of old, small single-family homes and apartment buildings adjacent to dreary industrial areas, teeming highways and imposing underpasses.

Nossiter and co-writer James Lasdun spent much of preproduction performing volunteer work at the homeless shelter where Oliver's tale begins. "One of the things that low-budget film allows — if one takes advantage of the opportunity — is the time to prepare for the actual filmmaking," says Nossiter. "I was able to get to know the people at the shelter, which helped with the writing, and I developed a visual relationship with the space, using video and stills."

Asked about his visual influences for *Sunday*, Nossiter admits to being "obsessed with fluorescents." He also admires the imagery of Eastern European cinema from the 1960s and '70s, as well as late auteur John Cassavetes'

Hi Tech - Low Budget

The independent feature film, "Rebel Heart" was a **35mm project with a 16mm budget**. When Writer-Director, Tim Powell and Gary Wagner (DP) came to us to explore approaches to cutting production costs, we suggested that they consider using some of the new ideas made possible by **Aaton timecode technology**.

Using the Flicker-free Color tap on the Aaton 35-3, an Aaton GMT TC generator, and Betacam SP deck, they bravely set out to prove you really can edit a show from **VideoAssist dailies**.

The Betacam SP deck became the 4-Channel audio recorder, the video assist recorder, and the 29.97 Time Code reference. The **camera was set at 23.976fps** instead of 24fps creating the same offset as the audio, thereby **maintaining sync when the final print is done with picture at 24fps and audio at 30 nondrop**. Using the Betacam SP deck with VITC, the tapes were ready for **digitizing into their AVID**. Not having traditional dailies, they relied on condition reports from the lab that the negative was good. Telecine costs dropped dramatically, because there was no syncing in Telecine, and then, based on the rough cut, **only timecode specific takes were transferred**.

Film stock was saved because only quick ID slates were filmed. Wagner says, "**It was nice not having the 2nd AC jumping in and out of frame, and not having to re-focus and re-frame.**" Director Powell says, "**The lack of slates definitely enhanced some of the performances in the more intense emotional scenes. The actors felt more spontaneous and concentrated.**"

As for the camera, Gary Wagner has become quite an Aaton enthusiast. **"Car mounts and in-car work became a breeze with such a small camera. Handheld work is a dream compared to traditional 35mm cameras. The quick change magazines and light weight equipment allowed my small crew to work fast. This was especially helpful for all the quick location moves we did."**

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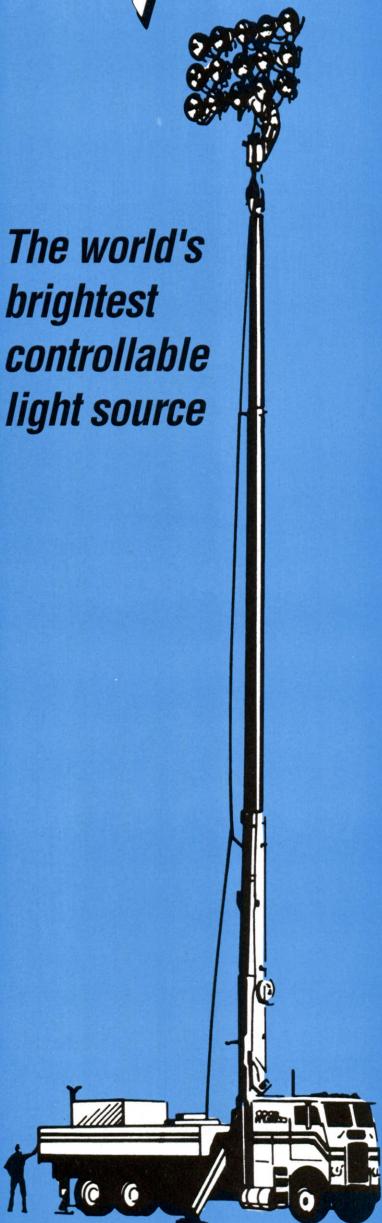
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More food for thought: Although not available when "Rebel Heart" was shot, the new Shot-Logger software for the Newton Message Pad 2000 takes timecode in, logs timecode specific scenes and takes, records comments, and downloads to most non-linear machines, automatically digitizing only selected takes.

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jittery vérité style. The director determined that Oliver's profound sense of dislocation would be best conveyed by lending an "institutional horror feel" to the shelter's lighting. Some of these shots include three or more different types of light — actual daylight, orange-tinted household tungsten and green-and blue-hued fluorescents — which became known on-set as "the checkerboard effect." Nossiter explains, "Using a variety of color temperatures on film gives an illusion of real life and immediacy, even though most people don't consciously sense much of the difference in the ways various types of artificial lights look in daily life. In using different color temperatures, we were able to get more out of the film stock by not limiting it to a certain restricted color range. This approach also allowed us to add color without using a lot of gels. I dislike that conventional night scene look where *everything* is bathed in blue gels; it's a phony, plastic look that I find completely lacking in appeal, but which has a great deal of gratuitous richness."

Finding a cinematographer to realize this strategy on film posed some problems for Nossiter; halfway through *Sunday*'s four-week schedule, the director felt that he and the original cameraman "were not seeing things in the same way." After shooting some footage with an interim cinematographer, Nossiter met with Maryland-based Michael Barrow, who began work the very next day.

Barrow notes that the film's mélange of color temperatures was mostly generated by existing household bulbs and fixtures. "As on most independent productions, we didn't have a lot of time to replace bulbs or to duplicate the look of the actual lighting with film lights. At most, we would occasionally augment the color that the tungsten and fluorescent lights were producing, and boost the key light with film lights and a few gels here and there."

An exception to this rule, however, was a donut shop scene slated to be lit entirely with practical, ceiling-mounted fluorescent fixtures. "We replaced all of the overhead fluorescent tubes above the actors with tungsten-balanced Optima 32 tubes, and we left the tubes in the background fixtures as they were," Barrow recalls. "Jonathan wanted to keep the flesh tones faithful, but let the background go green."

Barrow, who also operated the camera himself, shot *Sunday* with an Arriflex BL-4 fitted with Zeiss prime lenses. "We used the 32mm lens most of the time, the 18mm a good deal, and occasionally the 85mm. Since we had no generator, our lighting package was small: two 2500-watt Pars, four 1200s and two 575s, as well as some Kino Flos."

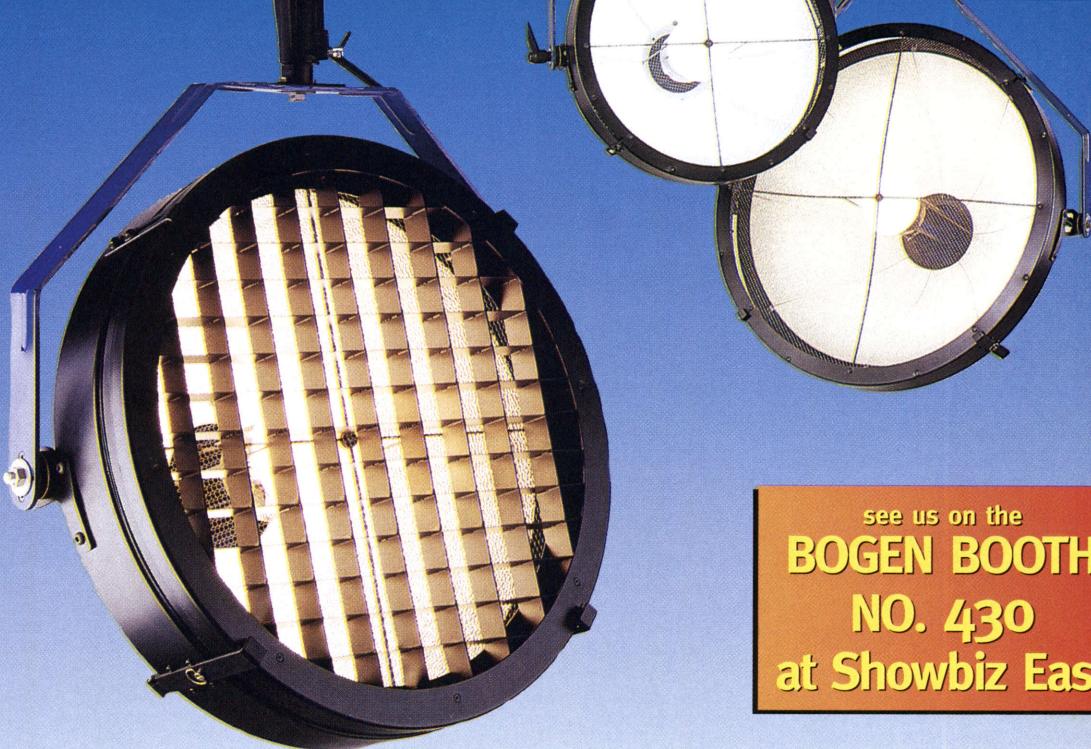
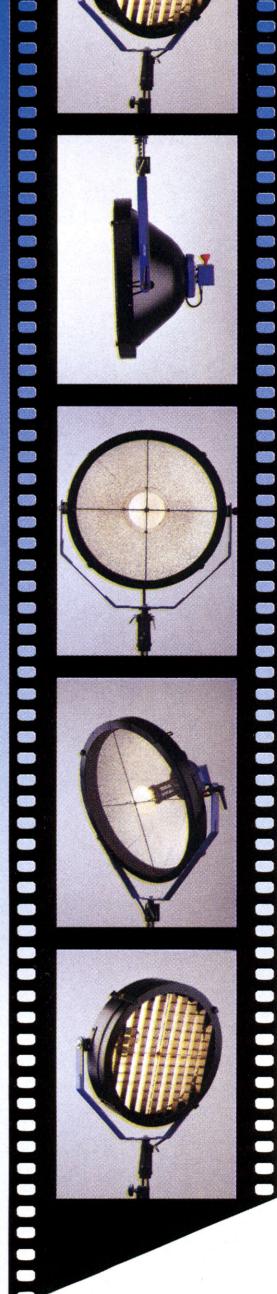
The range of Kodak stocks that Barrow utilized was almost as varied as the picture's color temperatures. The cinematographer employed 500 ASA 5298 for night exteriors; 200 ASA 5293 for interiors; 50 ASA 5245 for day exteriors; and even a small amount of 250 ASA 5246. (Barrow employed little filtration except for a Mitchell A, which lent a slight softening effect to close-ups of Lisa Harrow.)

Nossiter offers much credit to Du Art color timer Kent McGrew, whom he says "was integral in helping us unify the film, especially with all of the fluorescents. He understood that I didn't want everything brought into 'normal' balance, and he let me have just the right amount of fluorescent green or tungsten orange. Color timing is very important on low-budget films, for obvious reasons; there are points in the timing where shots will just snap and crackle, and Kent



helped us find those points consistently." (Both director and cinematographer also praised first AC David Hocs and electricians Amy Kupferberg and Catherine Ramsey, who were on-set throughout the production.)

Nossiter must be pleased with *Sunday*'s color-clashing imagery, since he's poised to take a similar approach on his next film, *Signs and Wonders*, a psychological thriller set in Athens, Greece. With ironic enthusiasm, he notes, "Athens is probably the most unattractive city in Europe. I took thousands of photographs during a scouting trip, and in some of my pictures, the Athens subway is so bathed in green fluorescent light it looks as if it's underwater!" ♦



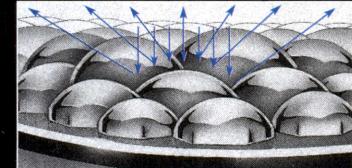
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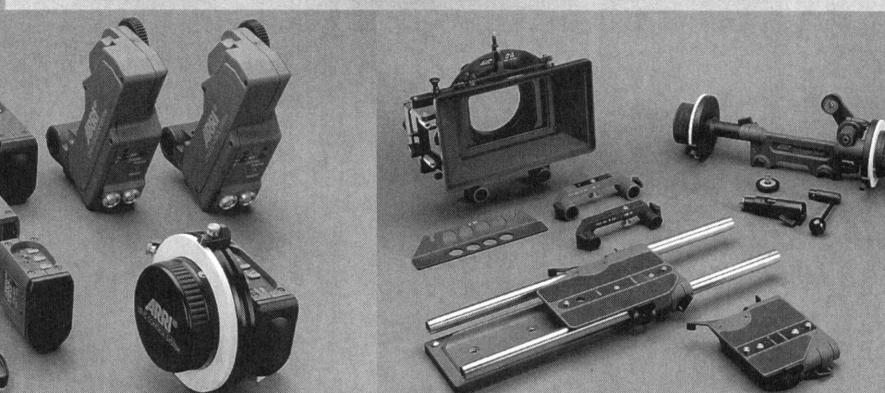
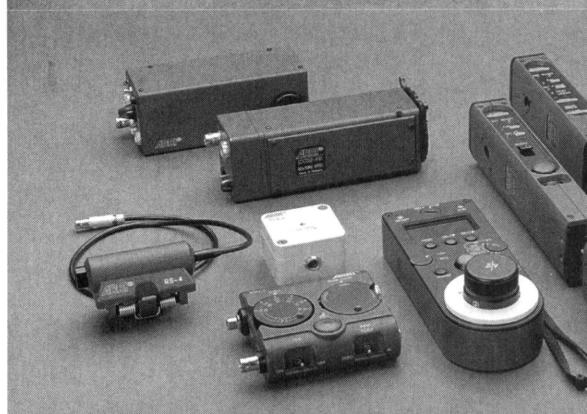
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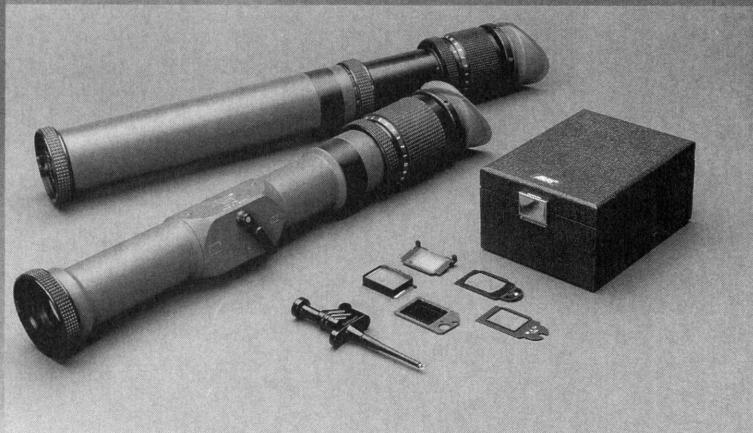
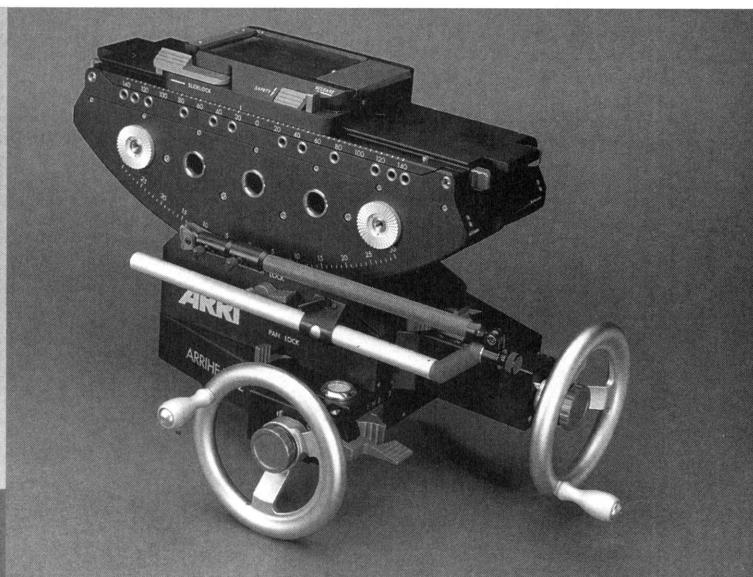
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Photos by Myles Aronowitz, courtesy of DreamWorks SKG

Thomas Devoe (George Clooney), an intelligence officer with U.S. Army Special Forces, are assigned to conduct an investigation. While her by-the-book methodology stands in contrast to Devoe's devil-may-care attitude, the two strike up an uneasy truce after the Colonel's contact in the Russian military is killed, and they themselves are almost murdered.

The first offering from DreamWorks SKG, *The Peacemaker* was directed by Mimi Leder, an award-winning director/producer of telefilms who studied cinematography at the American Film Institute. Leder launched her career with a six-year stint as a script supervisor on *Hill Street Blues*. She has helmed such acclaimed dramas as *L.A. Law*, *China Beach* and *Crime Story*, and the Emmy-winning

The threat of terrorism may be an ever-increasing global concern, but *The Peacemaker* deals with a post-Cold War crisis of epic proportions: the Russian Mafia's illicit sale of nuclear bomb components to terrorist forces. The film was inspired by the 1995 reportage of *Vanity Fair* contributing editors Leslie and Andrew Cockburn, who wrote about the ease with which criminals in Russia and other former Soviet countries could steal and sell deadly nuclear materials to the highest bidders. In adapting this investigative journalism, screenwriter Michael Schiffer (*Colors*, *Crimson Tide*) found that the U.S. and other Western government intelligence agencies were surprisingly anxious to share once-classified intelligence reports. One National Security Council employee painted a rather grim picture for the scribe: "Imagine how even a tiny nuclear explosion — a one-kiloton blast at 3 p.m. in the World Trade Center — would change Americans' lives forever."

The Peacemaker begins in a remote part of Russia, where a nuclear explosion occurs during a train hijacking. Dr. Julia Kelly (Nicole Kidman), a nuclear physicist and acting head of a White House policy group, suspects that the explosion might be a cover-up for the pilferage of a nuclear arsenal by terrorists. She and Colonel

Above: Dr. Julia Kelly (Nicole Kidman) and Colonel Thomas Devoe (George Clooney) narrowly escape an attempt on their lives by the Russia Mafia. Right: Devoe takes aim at a foe.

Terror at Ground Zero

In *The Peacemaker*, director Mimi Leder and cinematographer Dietrich Lohmann exploit Eastern European locations to craft an unconventional action film.

by Bob Fisher



mini-series *A Year in the Life*; she also earned an 1995 Emmy for her direction of the *ER* episode "Love's Labor Lost."

In selecting a cinematographer to photograph her first feature, Leder chose Dietrich Lohmann, a renowned German cameraman who has compiled approximately 100 cinema and telefilm credits in Germany, France, England and the United States. Born and reared in Berlin, Lohmann's interest in filmmaking was piqued by a job he held at a small production company after high school. He subsequently enrolled in the Berlin Film School, where his mentors included experimental filmmaker Alexander Kluge (*Yesterday Girl*), who, along with directors Werner Herzog and Volker Schlöndorff, obtained state-sanctioned support for West German filmmakers under a lobbying organization known as Young German Film.

After his graduation from film school in 1969, Lohmann became part of the burgeoning New German Cinema as a regular collaborator of prolific director Rainer Werner Fassbinder. That year alone, Lohmann crafted black-and-white imagery for Fassbinder's *Love Is Colder Than Death*, *Katzenjammer*, *Gods of the Plague* and *Why Does Herr R Run Amok?*; his work on the first three of these pictures earned him the Federal German Republic's Film Prize. In the next four years, Lohmann and Fassbinder collaborated on *Rio das Mortes*, *Die Niklashauser Fart*, *The American Soldier*, *Pioneers in Ingolstadt*, *The Merchant of Four Seasons*, *Jail Bait*, *Eight Hours are Not a Day*, *Bremen Freedom* and *Effie Briest*. Lohmann also worked with many of the other modernist German directors, including Herzog, Schlöndorff, Edgar Reitz and Bernhard Sinkel.

In 1986, director Dan Curtis asked Lohmann to shoot the European sequences for the 38-hour TV mini-series *War and Remembrance*. Afterwards, Curtis brought Lohmann to the United States to shoot the remaining sequences. The cameraman spent two years shooting the sprawling series, and his work earned him a

1988 ASC Award. Lohmann subsequently relocated to Los Angeles. His other cinematic credits include *Silence Like Glass*, *Salt on Our Skin*, *Knight Moves*, *The Innocent*, *Color of Night*, *A Couch in New York*, *Snakes and Ladders* and the upcoming disaster film *Deep Impact*, also directed by Mimi Leder.

Commenting upon his cinematographic approach, Lohmann says, "My education generally fostered an appreciation of art. I still spend time in museums looking at old paintings, studying the artists' techniques and how they use light in their pictures. My cinematography has been influenced by both American and European movies. The European style of filmmaking is different than the American style, but there are also differences between French, British and Italian movies. Even though I shot many films in Germany, I think I am more influenced by British and French filmmakers than Germans and Italians.

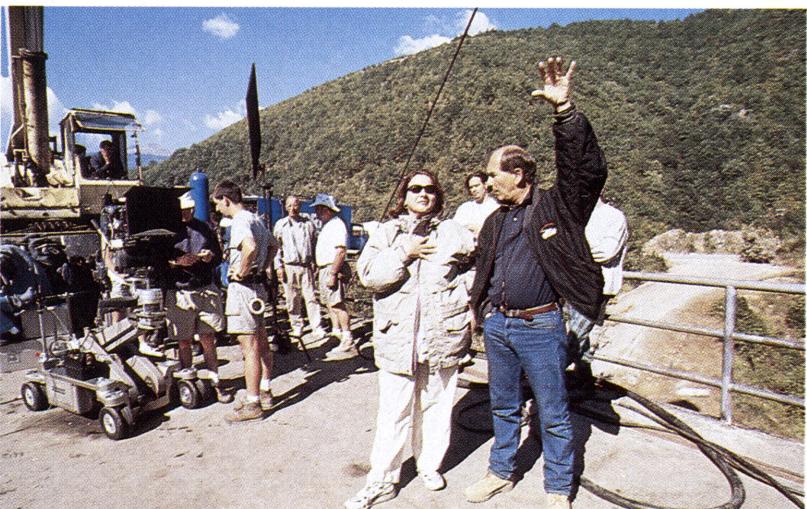
"The most important thing that I've learned is that good

lighting is not necessarily 'pretty.' Good lighting is something that you don't notice. If the images are too beautiful, they will take you away from the storytelling."

The Peacemaker was shot on location in New York City, and the following Eastern European sites: Bratislava, Ohrid and Bitola, Macedonia and the surrounding environs, and Martin, Slovakia. Leder, producer Branko Lustig and production designer Leslie Dilley (*The Empire Strikes Back*, *The Abyss*, *Alien*) spent four months in Slovakia and Croatia scouting locations and building sets. In blocking out his camera moves, Lohmann benefited from brief visits to the locations and concentrated time with Dilley. The production designer created sets for the interior of a full-sized Boeing 727 and a two-story Pentagon war room within an unfinished trade and conference center near Bratislava. He also transformed an ice hockey arena into a 200-foot-long White House corridor and a basement complex which duplicates the com-

mand center for the Nuclear Smuggling Group. "Leslie understood our needs for space for camera movement on the Steadicam, dollies and cranes, for wild walls, and for [motivated] source lighting," the cinematographer notes.

Lohmann believes that cinema-



Top: Dr. Kelly tracks the trail of a stolen nuclear weapon across Russia, Iran and Eastern Europe. Left: Cinematographer Dietrich Lohmann gestures while mapping out an impending shot with director Mimi Leder.



Clockwise from top: Devoe and Kelly are rescued after a near-fatal terrorist attack in New York City; the intrepid duo have a secret meeting in Venice, Italy with Russian officer Dimitri Vertikoff (Armin Mueller-Stahl); Kelly endures a tense moment.



tographers and costume designers should always have ample time to confer, especially on the selection and mixing of colors. "Sometimes what you see with your eyes isn't what you are going to see on film," he says. "One color can sometimes pop out much more than the others. It makes a difference in how you light. It's important to shoot costume tests, but we didn't have much time to talk about costumes or shoot tests, because I was scouting the locations."

Leder and Lustig had considered filming *The Peacemaker* in the 35mm anamorphic format until Lohmann convinced them to

shoot in Super 35. Though both widescreen formats share the 2.35:1 aspect ratio, Lohmann prefers the lenses available for Super 35, which are also employed in the spherical 1.85:1 format. "I've shot a couple films in Super 35, and the experience has always been good," he says. "With improvements in negative and intermediate films, as well as in the optics used in the labs, you can get high-quality prints in 70mm and widescreen 35mm formats."

One concession Lohmann made in shooting Super 35 was minimizing emulsion grain to compensate for the optical postproduction process required to create widescreen intermediates and prints. "I wanted a fully exposed negative with as little grain as possible. This was before the Kodak Vision films were available. I shot tests comparing Eastman's [100-

speed] 5248 and [500-speed] 5298 films to other stocks."

Lohmann decided to push this approach a step further by using the 200-speed Eastman EXR 5293 film instead of 98, opting to sacrifice the faster stop in favor of a smooth, grainless look. While some cinematographers might rely on fast films as a substitute for lighting, Lohmann's tendency is to maximize the natural light — boosting it, if necessary, to achieve the desired look. "I don't have one style of lighting, like soft light or hard light," he says. "Instead, my approach is defined by the scenes and the story. This picture didn't call for soft light. It is more of a throwback to my early black-and-white films with Fassbinder, which had sharply defined shadows. You have to think in three dimensions

with shadows and light — foreground, middle and background."

Principal photography on the *Peacemaker* began with 19 shooting days in New York City, where the filmmakers shot exteriors on Fifth Avenue; interiors and exteriors at the Peninsula Hotel, where

the production occupied an entire floor; outside the United Nations headquarters, the target of the film's terrorists; at a 100-year old high school; and inside a huge building that housed a constructed church interior.

In Eastern Europe, Lohmann's crew included 27 Americans and more than 100 Croatians and Slovaks. He brought an operator, assistant, gaffer, key grip and dolly grip with him, and many of the crew members hired in Europe had worked with him on *War and Remembrance* and other films. The show's camera and lighting packages were provided by Arri Munich; his basic cameras were the Arri 535A and B, outfitted with Zeiss lenses. (The front-end labs were DuArt in New York and Arri in Europe, while release printing was done by Technicolor in Hollywood.)

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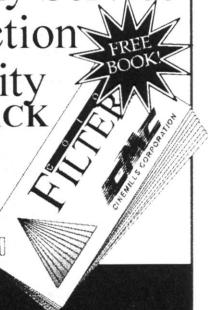
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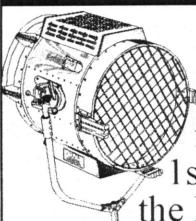
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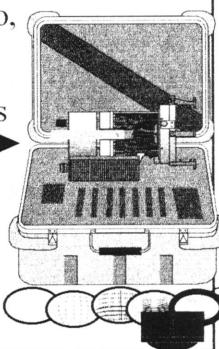
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To convey certain dramatic story points — sometimes on an almost subliminal level — Lohmann exploited the Arri 535's ability to ramp film speed during a shot with in-camera exposure compensation. "Sometimes we used that technique for something simple, like starting a shot on a character walking in slow motion, and then ramping up to normal speed," he says. "It's a bit like using Dutch angles, where you tilt the camera slightly and revert to its normal position. When viewers

ing *ER's Practical Approach*" (Oct. '95), who also served as the A-camera operator on the picture.

The film's camera style was designed to involve the audience as subjective participants, rather than uninvolved spectators. "The objective is to suck them into this story without drawing attention to the camerawork," says Lohmann. Three cameras were often deployed to enhance coverage from different angles, providing editor David Rosenbloom with as many options as possible. Exceptions were instances when Bee was operating the Steadicam, when sets or locations were too small, and situations in which additional cameras could compromise the scene's lighting. Important action sequences, however, were generally covered with five or six cameras.

Lohmann says that the most interesting technical and artistic challenge of the project was effecting reality on sets, such as the interior mock-up of a B-27 aircraft supposedly in flight. Detailing this shot, the cinematographer recalls, "We moved the camera around the cabin on a Steadicam. It's a natural point of view for anyone who has flown. Meanwhile, outside the windows, we used combinations of light and smoke — mainly light — to amplify the sensation of the plane's movement. We constantly changed the angle and direction of our 'sunlight' to simulate flight: daylight comes from outside, and night light comes from low-key, overhead fluorescents, which give off a nice soft light."

As the plot of *The Peacemaker* progresses, a U.S. surveillance satellite pinpoints the movement of the stolen nuclear weapons, which are being transported through Russian territory towards the border of a belligerent nation. At this point, the film tracks a high-risk, military-style operation, and Lohmann subtly altered the quality of both his light and colors to heighten tension. Although the transitions are not obvious, "The look gradually becomes harsher. The colors become cooler, and the rhythm of the movie quickens; we also used more off-center camera angles."

Lohmann changed his tac-

"I told Mimi, 'If you're planning to shoot a conventional action movie, I'm the wrong guy.' We discussed the look and agreed that the most important thing was to tell the story and make the film realistic."

— Dietrich Lohmann

see things like that, they know it means that something isn't right, story-wise."

Typically, Leder began rehearsals without cameras, and would only bring them in when she and Lohmann were fine-tuning a specific scene's visual perspective. Afterwards, the duo would discuss camera angles, movement, coverage and the mood of the lighting. "In our first meeting," recalls the cameraman, "I told Mimi, 'If you're planning to shoot a conventional action movie, I'm the wrong guy.' We discussed the look and agreed that the most important thing was to tell the story and make the film realistic. Mimi is a fabulous listener and she gave me the time I needed with her to get ready." (Lohmann was hired only four weeks before production began on May 28, 1996.)

Throughout *The Peacemaker*, Leder wanted the camera to be constantly floating. Lohmann made liberal use of a Steadicam operated by Guy Bee (see "Diagnos-

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Sleight of Hand

Pacific Title Digital's invisible effects add emphasis to *Peacemaker's* impact.

The last thing Joe Gareri wants to do is attract attention to his work. He's a producer for the Los Angeles-based Pacific Title Digital (the computer graphics wing of Pacific Title & Arts) which handled some 50 effects shots for *The Peacemaker*. "Small flaws and inconsistencies can shatter illusions," he says. "It's important that we never let the audience guess there are any effects shots at all."

One of PTD's more intricate assignments on the DreamWorks action-thriller is a scene in which a weapons-laden military train traveling through the heart of Russia is attacked by forces from another locomotive — appropriately, the two vehicles are respectively referred to as "Hunter" and "Prey." Shadowy figures from Hunter board Prey, and soon the insurgents' flashlights are slicing through the inky darkness to reveal glimpses of dead soldiers. A crate is removed from Prey, followed by a huge explosion: a ploy to cover up the terrorist's theft of a nuclear weapon.

Camerawork at the location (in the mountains of Macedonia) was shot day-for-night with additional elements filmed on a bluescreen stage. The Hunter train had a glowing red light in front of its caboose, and running lights all around while smoke poured liberally from the hull of Prey. When editor David Rosenbloom was cutting the scene, some details didn't match from frame-to-frame. "We scanned the negative," says Gareri, "and added smoke from an element provided by Pacific Data Images. Adding smoke sounds simple, but the train is moving through trees. In one shot, the bad guys are on top of the train, and there is supposed be white smoke blowing in the wind. We matted the characters out, composited the smoke behind them, and then put them back in; we had to do some rotoscoping to make it look real. We also added

CG running lights and a red glare to some frames. As the night turned to dawn, we darkened and brightened the sky, which affected background colors. We added flashlight beams to some scenes, and tracked both the train and camera movement; bluescreen elements were composited with backgrounds. There was a lot of manual work pulling mattes, painting, and color grading. All compositing, 2-D and rotoscoping, was done with Cineon software, while Matador was used for paint and cleanup on some shots; everything ran on Silicon Graphics platforms. We worked closely with PDI because a lot of our shots had to match theirs. It all had to look natural."

In another scene, helicopters track a truck cruising along a mountain road. The background plates in this scene are actual aerial footage, and the exposure of the background had to match with the exposures of the actors in the helicopter. In addition, several helicopters were added to the shot. "We replicated a few choppers off the film, scaled them up and down, and gave them a bit of movement that matched the tracking of the camera," says Patrick Phillips, senior artist/technical supervisor. (The team of artists, lead by effects supervisor David Sosalla, included Olivier Sarda, John LaFause, Jeff Wells, Jennifer Law-Stump, Tom Lamb and Michael Degtjarewsky.)

In a scene aboard an aircraft — actually a set filmed in Eastern Europe — the plane is supposedly leaving New York City. According to Sosalla, stock film images of the airport and Manhattan were composited into the aircraft's windows; the imagery began as a two-layer composite, and clouds were then added to create a sense of forward motion. Observes Sosalla, "This shot started out as a straightforward composite, but we had to make it more complex because it needed to feel authentic." — Bob Fisher

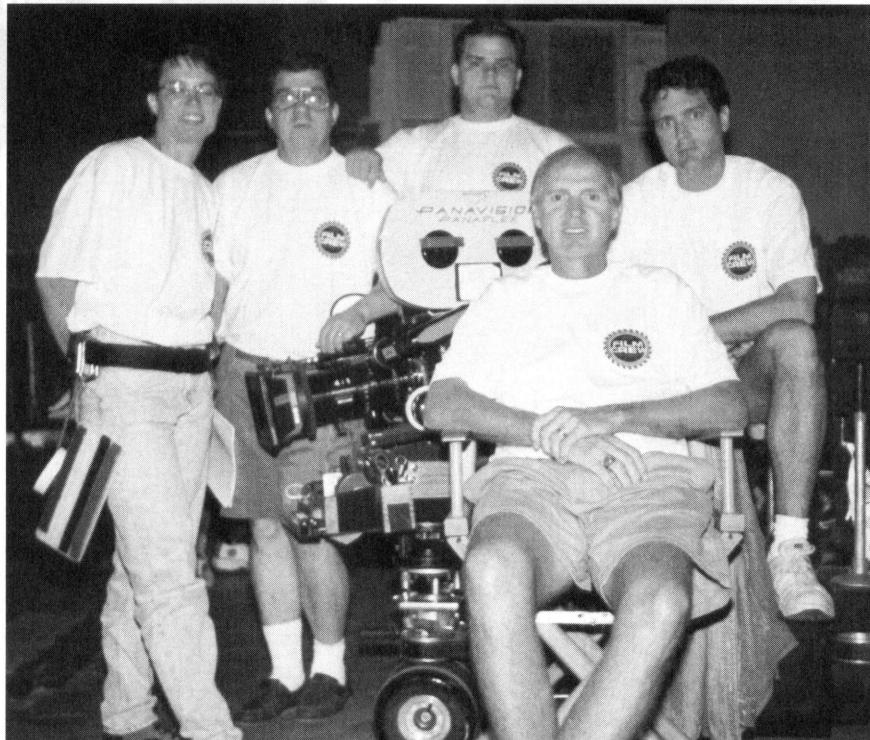
tics a bit while covering scenes set in the Pentagon war room. He used very wide (16mm and 18mm) lenses, often on a Steadicam, to capture the set's scope and to establish a feeling of depth, but he also did shots with very long (600mm to 1000mm) lenses, allowing the editor cut-away material. "You never have a feeling of a moving shot with a very wide lens," he says, "because we cut away to these extreme long shots."

A number of composite effects shots were executed for the more involved action sequences, including a head-on collision between two trains when a shipment of nuclear weapons is hijacked from one of the locomotives. "The entire train crash sequence was shot day-for-night," Lohmann says. "After the crash, there's a huge explosion. We had dramatic aerial footage, and it would have been very difficult to shoot that at night. We were shooting in a strange country, and we didn't have a good idea of what was going to happen with the sun — whether it would be an overcast or rainy day. It's best to shoot day-for-night on an overcast day."

Another interesting sequence involving digital effects occurs toward the film's climax, during which helicopters track the terrorists' attempt to effect an escape via a mountain bridge spanning a deep ravine. "The company couldn't locate an appropriate location where a mountain bridge spanned a ravine," Lohmann explains. "The ravine and mountain background were created in CGI and composited with the live-action film and background plates. The CGI work was done by Pacific Data Images and Pacific Title Digital.

"Some people are afraid that digital effects will take something away from what the cinematographer does, but I think the opposite is actually true," Lohmann opines. "Our work with the digital effects people is a [new form of] collaboration that can give us the freedom to do things we've never done before. It is still an art and a craft, however; you still have to shoot the background plates and do dramatic lighting on foreground elements." ♦

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Pictured on the set of "Savannah" are Jacqueline Nivens, 2nd AC; Joe Thomas, 1st AC; Fred Thomas, Loader; Brian Gurley, Operator; and sitting in front, Frank Johnson, Director of Photography.



San Francisco entrepreneur Nicholas Van Orton (Michael Douglas) examines a mysterious harlequin that marks his enrollment in a bizarre and manipulative game.

After scaring moviegoers out of their wits with the inventive and highly successful chiller *Seven* (see AC October '95), director David Fincher sought a follow-up project that would subvert the public's expectations. The resulting film, *The Game*, is another existential foray into the dark side of the human psyche, but Fincher's latest eschews serial killers for "suits."

The picture stars Michael Douglas as wealthy San Francisco entrepreneur Nicholas Van Orton, who is drawn into a bizarre string of events after receiving a unique present from his estranged brother Conrad (Sean Penn). Conrad's gift launches the elder Van Orton's unwitting enrollment in a mysteriously orchestrated "adventure game" ostensibly designed to instigate positive, life-changing realizations. The game's participants are thrust into a series of manufactured scenarios within their real lives, to the point where they can-

not be sure which events are authentic and which result from the strange machinations of CRS (Consumer Recreation Services), the adventure's sometimes sadistic organizers. As he is manipulated, tested, and deceived, Nicholas soon discovers that the real purpose of the game may not be personal enlightenment, but something far more sinister.

"*The Game* is not a big action movie," Fincher asserts. "It is much more of an intrigue movie. There are no big plane crashes in this film. If the movie is about anything, it's about loss of control. We wanted to create an experience for the audience that didn't seem contrived, even though it is quite contrived. What we've come up with is a very different take on the idea of 'old money' and wealth. It definitely ain't *Dynasty*!"

Fincher began working in the film industry in the early Eighties as a visual effects technician at

Industrial Light & Magic. He then went on to direct a slew of memorable and influential music videos for such artists as Madonna, Paula Abdul, Aerosmith, and the Rolling Stones. Fincher also gained valuable experience on commercial shoots, honing his eye while mastering a variety of cinematic tools and techniques. He made his first foray into the feature film arena with the visually accomplished *Alien*³, and then burst into prominence with *Seven*.

"I have a philosophy about the two extremes of filmmaking," says Fincher. "The first is the 'Kubrick way,' where you're at the end of an alley in which four guys are kicking the shit out of a wino. Hopefully, the audience members will know that such a scenario is morally wrong, even though it's not presented as if the viewer is the one being beaten up; it's more as if you're witnessing an event. Inversely, there's the

'Spielberg way,' where you're dropped into the middle of the action and you're going to live the experience vicariously — not only through what's happening, but through the emotional flow of what people are saying. It's a much more involved style. I find myself attracted to both styles at different times, but mostly I'm interested in just presenting something and letting people decide for themselves what they want to look at.

"I look for patterns in coverage, and for ways to place the

In selecting a cinematographer to help him achieve first-class visuals for *The Game*, Fincher chose New York-based director of photography Harris Savides. The duo had previously collaborated on several commercials, and also on the striking title sequence and second-unit work for *Seven* (which was photographed by Darius Khondji, AFC). "I knew I wasn't going to have a lot of time to get involved with the lighting on *The Game*; which is something I normally love to meddle in," says

do, so just do what you'd do... I have that much faith in him. It's also a lot of fun to be around him and to watch him work; he's incredibly responsible. When he tells you how long it's going to take to light a shot, that's how long it's going to take. I needed someone that I could trust, so I could walk away [from a setup], come back later, and say, 'Wow, that's beautiful, let's shoot it.' *The Game* was a great opportunity to give Harris a big canvas to work with, and I think the richness of the movie is a tribute to his ability to make things look beautiful. I'd love for people to see this movie and appreciate how much work went into making it look as if *very little* work went into it."

For Savides, the project represented the chance to expand his feature film resume on a prestigious \$50 million project — just a year after earning his first studio feature film credit on director Phil Joanou's *Heaven's Prisoners*. Prior to his big-screen debut, Savides had established himself as one of the most prolific and talented cinematographers working in the realm of commercials and music videos. The cameraman studied film at the School of Visual Arts in New York, but was enticed into the still photography world after taking several still courses as part of his film curriculum.

After graduating, Savides assisted several still photographers in New York before moving to Milan and Paris to put together a portfolio of his own

photography.

Returning to the United States, Savides became involved in music video production, his cinematography catching the attention of several prominent music video directors. The cameraman soon found himself shooting for directors like Ridley Scott, Mark Romanek, Jeff Priess and Fincher.

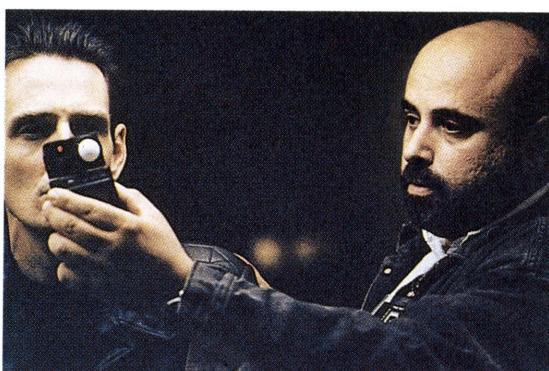
Given *The Game*'s tension-packed narrative — and the mounting complexity and out-

Far left: Director David Fincher eyes a shot through a specially repainted black Panavision camera. Near left: Cameraman Harris Savides takes a meter reading.

Playing for Keeps on *The Game*

Director David Fincher and cinematographer Harris Savides lend their talents to the chilling tale of a very sinister corporation.

by Christopher Probst



camera to see what you need to see, from as far away as possible," he continues. "I try to remain semi-detached; I want to present the material without becoming too involved. I'll say to myself, 'Am I getting too involved in the action? Am I presenting this to someone who's uninitiated to these people, and doesn't want to be in the middle of this argument? Maybe we should be doing over-the-shoulders, as if the spectator is experiencing the scene after returning from the water cooler.' My [visual] approach comes from a more voyeuristic place."

Fincher. "This was an all-encompassing movie for me. A lot of thought had to be given to a number of different elements, because every scene is filled with three or four different [narrative] lies. We had to constantly balance all of the different lies we were telling, which can become enormously confusing.

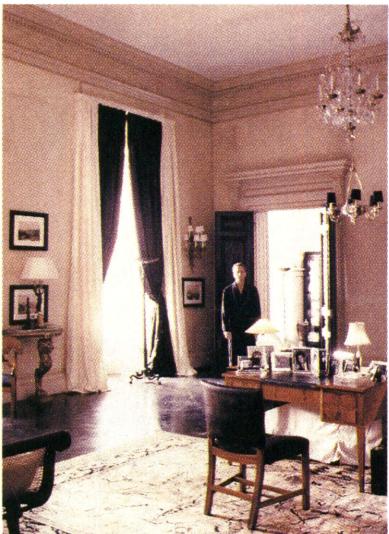
"Harris is one of a handful of people in the world to whom I could say, 'Well, you know what to



Above: Van Orton recalls his childhood years (shot at at the 654-acre Filoli estate in Woodside, California). The filmmakers filmed the flashback footage on 16mm VNF color reversal film to simulate a home-movie aesthetic. **Right:** Inside the Filoli mansion, Van Orton is unaware of the trials that lie ahead. Says gaffer Claudio Miranda, "For the windows we usually had big sources, like Maxi-Brutes and Deca lights, or 12K HMs going through light gridcloth. Inside, we often used a lot of 'mushballs,' which are muslin-covered sources made by gaffer Ian Kincaid and his partner, Dave Dubois."

geousness of the events that occur in the story — Fincher and Savides decided early on to ground the film with a very realistic look. "We wanted Nicholas Van Orton's world to be very rich and supple," Fincher submits. "We talked about films like *Being There* and *The Godfather*, both of which present these very beautiful worlds that have [a sinister side under the surface]. In our film, things start to get out of control when Van Orton leaves his pristine world. We would let fluorescents, neon signs and other lights in the background be seven stops overexposed. When we shot the night exteriors, we weren't so concerned about balancing those lights; we let things get a bit wilder out in the real world.

"We also talked about 'white' night as opposed to 'blue' night, and the idea of a night where things go into deep blacks and shadows. In some scenes, people run out of little pools of light and just disappear, because there's no edge light on them. We wanted to create the type of feeling you get when you park your car three blocks from your house at night and then have to walk down the street. In that situation, you invariably look over your shoulder, because it's dark. We wanted a night look that felt real, with uncorrected practical sources. We'd have sources like sodium-vapors, metal-



halides and mercury-vapors all mixed together to produce certain colors. But if we were going to pick up the exposure on somebody, even at three stops underexposed — we had keys at 2 1/2 to three stops under for a good deal of the film — we used white night. We were trying to find a look that was neutral, without trying to make a statement about it — 'Okay, this is what night looks like.' In this picture, night is night, and practicals are practicals. Even if all of the tubes in a parking structure were green, we didn't change them; we just shot them the way they were. We even brought some metal-halides along on the truck, so we

could just tape them up whenever we wanted. There's nothing like the blue-green look that you get from them; you can gel lights all you want, but it just doesn't look the same. There's a certain hideousness to them, a frequency that just feels different."

Savides notes, "David wanted this film to look somewhat banal. We didn't want to use Xenons to go for a very modern, slick look; we tried to be a bit subtler. We wanted the film to look very natural and real, and I feel that the nights in the picture do look like nights.

"In essence, we wanted to maintain a sense of reality in the look of the film so that audiences would believe what was happening in the story. This was a big-budget movie, but we made a conscious decision to keep things simple, with no tricky stuff. Of course, we were both terrified that this approach might be boring! David and I both have a full bag of tricks, and sometimes we'd begin asking ourselves, 'What did we do? Did we make a boring-looking movie?' I hope our decision to hold back a bit lends the film a certain dignity. I wanted to tell the story without drawing undue attention to the lighting."

The filmmakers shot *The Game* in Super 35, with a special-centered Super 35 ground-glass — as opposed the standard common-topline configuration. Savides worked with Panavision cameras and Primo lenses, while his stocks of choice were Eastman Kodak Vision 320T (5277) for daytime interior and exteriors, and Vision 500T (5279) for nighttime scenes.

After conducting extensive tests in prep, the duo also decided to make Technicolor's ENR printing process an integral part of the film's look. Both Fincher and Savides had done some work with similar silver retention/silver additive processes, such as Deluxe's bleach-bypass CCE process, which was used on some select prints of *Seven*. "The ENR gives you a look that's a bit more supple," Fincher explains. "It tends to lend a smoother look to things that have blown out at the highlight end — where you'd pick up grain and get

For *The Game*, visual effects supervisor Kevin Haug (whose credits include Madonna's *Bedtime Story* and Michael Jackson's *Scream* music videos) relied on 525 Post Production in Los Angeles and Command Post of Toronto.

Of particular concern was a sequence in which Nicholas Van Orton (Michael Douglas) takes a nocturnal leap from the roof of a downtown skyscraper. Haug worked with 525 Post producer Jenny Bright and effects artists Alex Frisch and Geoff McAuliffe to construct the sequence, which opens with an overhead view of Van Orton on the building's roof. Frisch explains, "We began our work on this shot with a 3-D computer model depicting the roof, building and atrium in order to get the composition and perspective right. We then worked with Kevin to decide which elements were needed."

The roof element with Douglas was shot on stage; the skyscraper facade and the atrium below were miniatures built by Acme Models; and the street was filmed in downtown Los Angeles. A 2-D matte painting of the surrounding neighborhood (done by McAuliffe in Photoshop on a Macintosh) and wisps of fog (filmed separately against black and composited in) helped tie the shot together.

After the film elements were scanned at EFilm at 2K 10-bit resolution and delivered to 525 Post, all of the color-correction and image compositing for the scene was done with Discreet Logic's Inferno software, running on SGI platforms. Says Frisch, "We began working with Inferno in 1996, for the title sequence on *The Island of Dr. Moreau* [see AC Sept. '96].

"For each shot in the sequence, we first worked in a low-res 12-bit format. This allowed us to work very quickly and make changes on the fly when [director David] Fincher was here. Because the low-res was 12-bit, we still had the same control over the colors, but the processing speed was much faster."

Bright notes, "All of our decisions and setups from the low-res tests were saved, so this final processing was more a matter of

Digital Post Adds Suspense to *The Game*

substituting the low-res images with the high-res versions."

When Van Orton leaps from the building, his plunge is shown from several angles, all of which were created by compositing an actor into cityscape background plates. Both Douglas and a stuntman were filmed hanging from wires in falling positions to provide bluescreen elements.

Fincher and cameraman Harris Savides filmed the plates in downtown San Francisco. White sand-filled milk jugs (also called "Fincher Balls") were tossed from the roof of a building. The jugs provided the effects artists with a proper witness point — in terms of velocity and trajectory — onto which an image of either Douglas or the stuntman could be attached.

Ultimately, Van Orton crashes through the atrium's glass ceiling and into the lavish ballroom within — filmed at the Palace Hotel in San Francisco. "They only let us remove one small panel in the ceiling so we could drop a stunt guy through on a wire," says Haug. "The breaking of the glass had to be done in CG."

It was decided to do the Inferno composite work for these shots in 4K 12-bit for higher resolution. "One consideration was that we had a lot of detail in this ceiling," Frisch notes. "Another was that we were adding the CG broken glass, which was [modeled in Alias/Wavefront and rendered in TDI] by Richard Baily of Image Savant. Fincher was so impressed with the quality of 4K that he compelled us to invest in a new Silicon Graphics Onyx² computer so we could work fast enough."

In Toronto, Command Post's Toybox visual effects department relied on Quantel's Domino system to do both wire and rig removal and some particularly difficult color correction. Recalls Toybox visual effects designer Paul Rigg, formerly a member of the Domino development team, "We primarily used the Domino for very selective color-correction. For example, there is one shot of a taxi hurtling into San Francisco Bay, which was

shot in the early morning; several of the shots of the sky were far too blue. I basically crushed the blacks in the sky and pumped up the lights on the [Oakland Bay Bridge] in the background. I did this with selective keys, creating a very saturated look.

"The Domino's seamless quality from scanning to recording was critical here because the end result was to produce a negative for ENR prints. The neg had to be very stable in terms of contrast and grain so that there would be no image degradation."

Working at 3K 8-bit resolution, Rigg reports that the Domino's ability to sample colors from one area and automatically re-create and match them in another was a help in his color-correction effects.

He additionally notes that the Domino scanner works at 6K 12-bit resolution, "and that information is never reduced in the system, so you're working in the same file size throughout your work. Bit depth was a point of concern for both Fincher and Kevin, because many people believe 'more must mean better.' But there are different versions of bit depth, depending on which system you use, so it's really impossible to compare different systems in those terms."

Command Post also runs a full 35mm lab, which "allows us to finish a shot, record out — on a Solitaire II that's heavily modified by Quantel and optimized for the Domino — make a film print in a few hours, and then see the image on the big screen that same day. It's really a luxury for us."

Haug remarks, "The work done at Command Post was very exacting, and one of the reasons we went there was because they're also a film lab and they understand film color correction. A lot of digital post houses that work in film don't really understand it. David was looking for a way to make his decisions based on how things would look on a film print, and the sharpness of what we could get from the Domino for those particular shots was superior."

— David E. Williams



Van Orton lunches with brother Conrad (Sean Penn), and receives the gift that will forever change his life. Says Fincher, "We shot that scene with as much available light as possible. The actors were keyed with just a 2.5K Par through a 4' x 4' frame of diffusion." Planning for the eventual loss of ambient daylight, the filmmakers photographed wide shots and all of the angles facing the windows first, then were able to continue filming into the evening by matching the lighting for the reverses and close-ups.

this sort of 'emulsion tearing.' You get a much smoother look at both the high and low ends. There are a lot of night sequences in *The Game*, and I didn't want them to be milky. One of the byproducts of massive underexposure is that a print starts to get milky in the blacks, but the ENR will hold the blacks for you; you're not as radically aware of the underexposure. We often shot night scenes with a key light that was 2 1/2 stops underexposed, but we would still be printing in the high 30s."

To extend the range of the film's latitude for night scenes, Savides chose to flash the Vision 500 stock by five percent, either in-camera with a Panaflasher or at Technicolor. He rated his metering at ASA 500. Extensive testing was also performed to lock in a series of printer-light numbers for the various day or night scenes so that the filmmakers could readily see any variances in their efforts. Additionally, the filmmakers screened printed dailies which incorporated 60 percent ENR as a baseline. "Locking in our printer numbers told us that any exposure mistakes were strictly on my end. If the lab is over there correcting for the variances, you don't know what's going on; you cancel each other out. If our dailies came back too blue or too dark, we could ask, 'What happened here? Did we screw up and

underexpose?' Of course, the numbers change when you time the film, but at least we were able to sleep at night. It was certainly better than the alternative: one day you get dailies and they look fine, but the next day, they don't look good, so you panic, call the lab and tell them to make it brighter. Then

"David is very clear about what he wants, and he has a great eye. I've learned a lot from him. He's not like a lot of other directors, who sometimes let their cinematographers run away with things. He has very definite ideas about the camerawork."

—Harris Savides

they come back too bright, and you don't know what's going on."

Fincher adds, "I find it distressing that you have to convince a studio to give you the extra money to get prints to look the way they should look. Paying more to get a print that has good blacks

is kind of criminal; we should be getting that anyway. When you're looking at a black area on your print, it should be black, not dark gray. If I were a lab man and it was my job to make a release print look as good as it could, I don't think I would say, 'Well, here's the normal printing technique, and here's the really good stuff.' Why should you pay extra for the good stuff if you're processing at Technicolor? They're supposed to be the best! Why are we paying more for ENR when it just makes Technicolor look better? After all, that's the purpose of this technology. Our experiences with Technicolor on this film were really good — probably the best I've had with any lab — but I'd like to see everyone become more involved with the quality of the images.

"I've shot Panavision exclusively for about 10 years now," the director continues. "And when we went to them, we told them that we didn't want to have to black the camera out every time we shot through a window. As a result, they gave us a black Platinum and a black GII, which is something they normally never do. That's what this industry should be about."

The Game was shot on a 92-day schedule, with extensive location work done in San Francisco. The picture incorporates such landmarks as the famous Filoli estate in Woodside, the Sheraton Palace hotel, the Presidio, and the city's bustling financial district. The production also shot in Mexicali, Mexico, and on several soundstages in Los Angeles. Fincher comments, "A lot of people choose not to shoot in San Francisco's financial district because it's difficult. Thousands of people move in and out of the area every day, so you can't shut down the streets, and it's very hard to maneuver around. But I love the district's old-money, Wall Street vibe, so we shot there on weekends. And since we were in San Francisco, we had those great hills and cable-car tracks. The setting combines beautiful old stone buildings, small streets, and the hills; the class system is represented pictorially. To capture even more of that old-money



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Right: Van Orton surveys the main entrance of the CRS corporate offices. The sleek, modern look of glass and black marble helped the filmmakers provide a visual counterpoint to the warmer, more opulent tones of Van Orton's usual upper-echelon surroundings. **Middle:** The entrepreneur submits to a battery of tests and questions, ostensibly to determine the character flaws that will be addressed in the "game." He soon discovers the more clandestine motivations behind the corporation's analysis. **Bottom:** Van Orton begins to suspect that all is not as it seems.

world, we set a lot of scenes in restaurants with hardwood paneling and lots of red leather. Michael Douglas' character lives in a mansion on top of a hill, so he has to go down into the city; in many ways, the movie is about descent."



Savides adds, "We kept Michael Douglas' character darker in the beginning of the film, shooting him in top-light to hide his eyes. Van Orton undergoes a metamorphosis during the course of the film, so we kept him a bit hidden while showing everyone else. We gave him more light later in the story, as he became a new person."

After establishing the tone and look of the film, the filmmakers began defining their style of coverage, as well as the positioning and movement of the camera. "David is very clear about what he wants, and he has a great eye," Savides attests. "I've learned a lot from him. He's not like a lot of other directors, who sometimes let their cinematographers run away with things. He has very definite ideas about the camerawork."

To maintain their restrained visual design for the film, the filmmakers decided to shoot as quickly and efficiently as possible. "The location shooting had an almost documentary edge to it," says Fincher. "We often went with small equipment, because a lot of the location work in San Francisco involved going up flights of stairs. In many situations, we used smaller dollies, such as the Fisher 11, and smaller lighting units, like Kino Flos. We didn't want to spend all day loading equipment into a location. Also, we basically used just three different lenses — the 27mm, 40mm and 75mm — for the entire movie. The 27mm was really the *lens du jour*; I fell in love with it on *Seven*, because of its neutrality. It has a wide-angle feel, but it doesn't stretch faces. The 24mm is just a bit too wide, and it's not a Primo."

Elaborating on this point, Savides says, "The limited lens palette was a discipline that David imposed on the project, but it really gave the film a consistency. We did use other lenses when we needed to, but very rarely; we didn't even have a 50mm on the show! I feel that the lenses you select creates a kind of language for a film. The choices we made just felt good. The 75mm, for example, is a classic close-up lens. [Using just a few lenses] is also a nice way to shoot because you don't have to deal with a mix of lenses — super-wide-



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Above: Van Orton discovers that his home has been vandalized by graffiti artists. The Filoli mansion's interiors were doused in UV paint by the production and graffiti artist Vince Moisden. The paint was then illuminated with several Black Moon UV fixtures and multiple on-screen Wall-O-Light banks equipped with Super Blue Kino Flo bluescreen bulbs. **Right:** Van Orton finds peaceful sanctuary in his library, prior to the room's Day-Glo transformation.

angles and so on. We didn't have to constantly figure out which lens we needed; the 27mm went on the camera, and we started working with it. If it didn't work, we put something wider on, but that happened very rarely."

This less-is-more aesthetic extended to other elements of the production as well. "I prefer shooting with a single camera," Fincher notes. "Naturally, we brought out more cameras for the few scenes involving stunts, but when you use multiple cameras [all the time], everybody becomes focused on coordinating things rather than achieving a [clear] point of view. Coordination is the most difficult and time-consuming aspect of filmmaking.

"We tried to stage scenes as simply as possibly," he continues. "If we shot a conversation at a table, we wanted the scene to be about what the characters were saying, not about the camera. When you shoot a scene like that with multiple cameras, you run the risk of boring people with coverage. When an audience sees a new shot every three or four seconds, they get used to the specific cutting patterns. If you give viewers one angle, it forces them to pay attention, and it can create an interesting tension. By not cutting away, you



can make them feel a certain type of anxiety. In a movie where you're trying to subvert people's expectations, ideas like that are key."

Savides agrees that simpler methods can produce interesting effects. "I'm always trying to get away with one light source," he says. "I always get frustrated when you can't do that because of the camera or the actors' movement. I've never approached photography from a technical point of view, but instead from a visceral place."

The Game opens with flashback footage from Nicholas

Van Orton's childhood at his wealthy father's mansion. Fincher and Savides wanted the sequence to look distinctly different than the rest of the film, so they shot Van Orton's "memories" on 16mm VNF 7240 color reversal film, a 125 ASA tungsten stock. Fincher explains, "We wanted a sort of overexposed look that was a bit uncontrolled in terms of contrast. We took the 16mm flashback footage, which was shot in a 'run-and-gun' style with a couple of Bolexes, and blew it up to 35mm [although scenes in which framing was critical were executed with a 16mm Panaflex fitted with a custom ground-glass]. We then struck multiple prints which we bleached, left out in the sun and/or scratched in different combinations. To make the flashbacks look almost like archival footage, we then assembled different cuts."

A match dissolve was used to create a transition from the face of the adolescent Van Orton to that of Michael Douglas. The filmmakers used the interior of his house, shot within the Filoli mansion, to visually establish Van Orton's elegant lifestyle. Detailing his lighting approach, Savides submits, "We tried to make Filoli seem very natural. A case in point is a scene in which Van Orton wakes up in his bedroom and answers the phone. We lit that shot from outside the windows with 12Ks through 1000H paper, adding a



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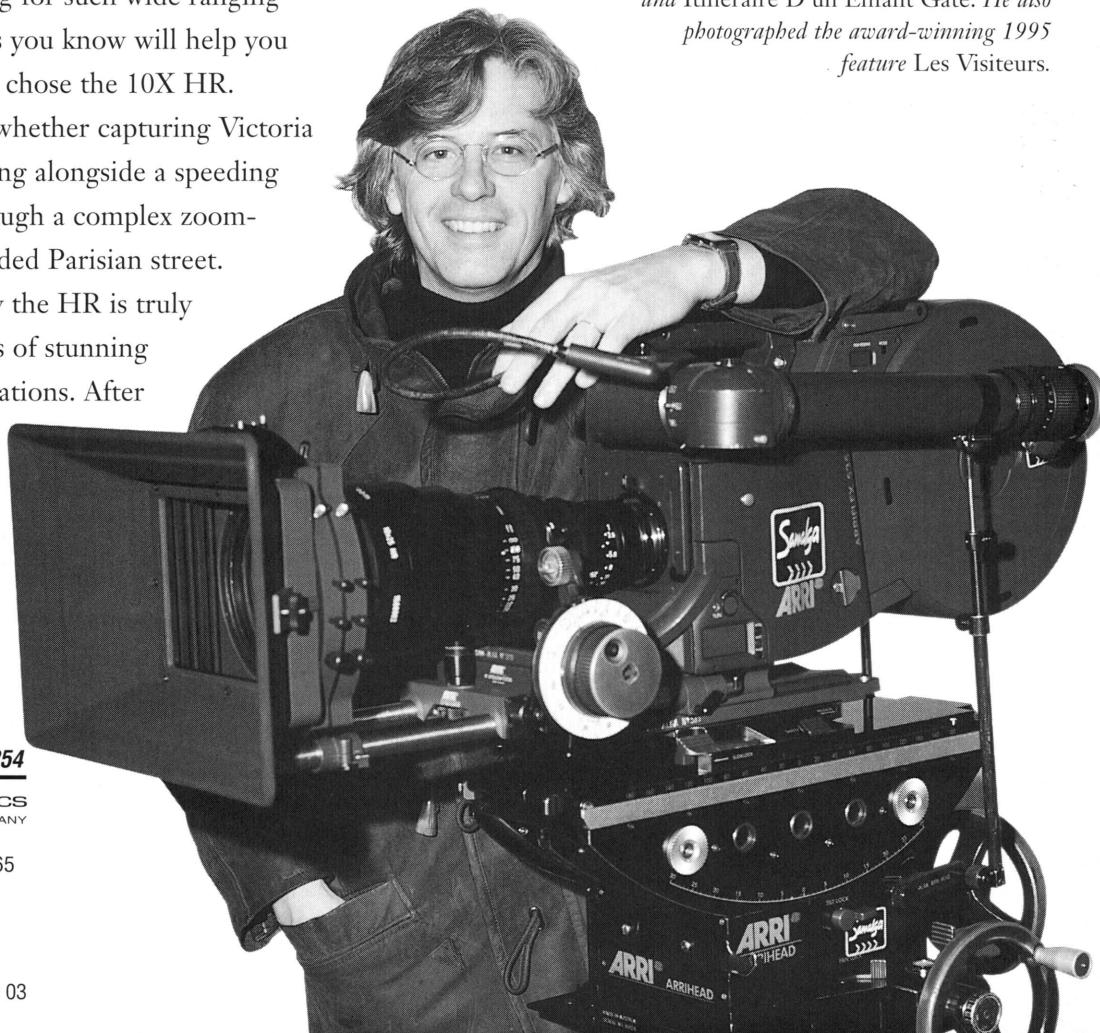
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Jean Yves Le Mener served as Director of Photography for a decade of films directed by Claude Lelouch, including *Les Misérables* and *Itinéraire D'un Enfant Gâté*. He also photographed the award-winning 1995 feature *Les Visiteurs*.



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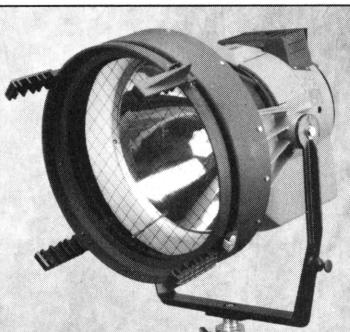
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After finding himself dumped in Mexico, Van Orton treks home in a dilapidated transit vehicle. Savides had gaffer Claudio Miranda and key grip Michael Coo rig multiple Maxi-Brutes on top of the bus. The duo also hung sheets of Luann along each side of the bus to provide bounce.

couple of Kino Flos [inside] for fill."

Savides' gaffer, Claudio Miranda, further details the cinematographer's overall approach. "We used a lot of 6' x 6' or 12' x 12' double bounces to get a soft key," Miranda reveals. "We'd aim nine-lights into muslin, and then bounce the light back through a light grid or another piece of muslin. Harris actually preferred muslin bounced through muslin, which we used in the bedroom scene at the beginning of the film. We'd just box the frames in [to control spill from the large bounce source] and then add a Kino Flo for fill. We basically tried to motivate the lighting as often as we could from practical sources like windows or lamps, and we kept things pretty monochromatic for both day and night scenes. We didn't want colors to pop out."

The plot of *The Game* begins to unfurl when Van Orton meets his younger brother for lunch at an elegant restaurant and receives a certificate for the CRS game. The scene was shot on location in San Francisco in an empty space that was transformed by production designer Jeffrey Beecroft (*Stop Making Sense*, *Dances With Wolves*, *12 Monkeys*). While planning a wide-angle shot of the

restaurant interior during a location scout, Fincher discovered that the use of his favored 27mm lens would require some adjustments. "The shot shows Michael Douglas and Sean Penn at their table," he relates. "The 27mm made them seem far away from each other, which is what we intended, but the distance appeared to be so great that we needed a smaller table. During the scout, I brought a camera with me so I could kind of set up the action with the location scout, Rick Schuller. When we set up that particular shot, we realized that we needed a 29-inch table as opposed to the 54-inch table. We also did a lot of light studies at the locations. When we found a location that we liked, Rick would take photos of all four walls every 15 minutes throughout the day, so we'd have an idea of what we would be seeing."

During the lunch scene, Van Orton's brother manages to convince him to visit the offices of the seemingly elite CRS corporation. In designing the company's interiors, the filmmakers chose to depart from the sumptuous wood-grain look of 'old money' San Francisco, instead creating a more modern, antiseptic look. "We definitely wanted that part of the film to be more slick," says Fincher.

Savides decided to use extensive top-lighting to lend CRS an appropriately institutional vibe. The company's glass and black marble foyer was lit in a sleek style reminiscent of a high-end car com-

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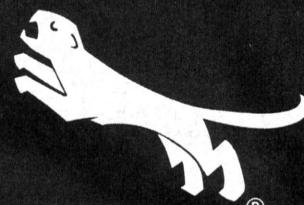
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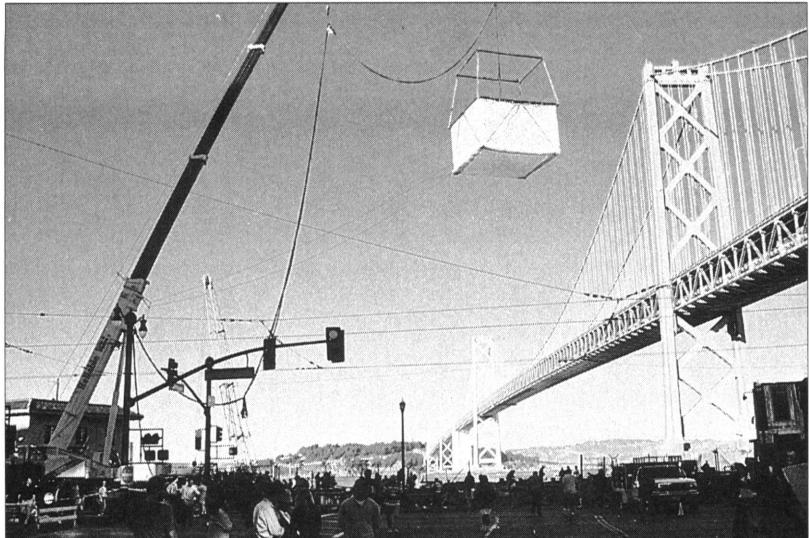
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For a stunt involving a taxi that plummets into San Francisco Bay, Savides used a custom 40' x 40' moon-box "because of the nature of the stunt, and because we were filming with multiple cameras. My key grip, Michael Coo, rigged lights in the strangest places and made them work." Adds Miranda, "The moon-box had about 25 space lights in it and was suspended off a 100' construction crane. Harris didn't want to make a source out of it, he just wanted to build up the ambience."



mercial. Gaffer Miranda says that the filmmakers used "12 space lights [in three-by-four rows] over the main entryway, aimed through muslin, to create the look of overhead fluorescent panels. In the hallways, we used double Kino Flo banks behind the panelings.

"For the CRS office interiors, we used 18 Maxi-brutes shining into a 10' x 50' muslin, which provided a 45-degree top light

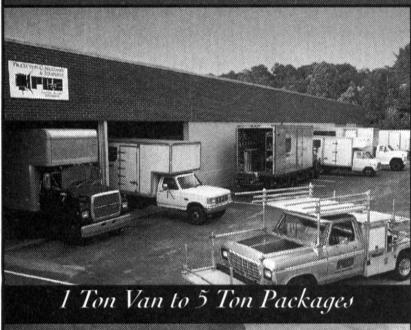
bouncing down into the set through a window. The bounce was hung above a TransLight, and the Maxi-Brutes were on top of the set walls — just above the windows, aimed toward the muslin. The bounce served as a source through the windows, and also provided a nice sheen on the polished floors."

Van Orton meets with a CRS representative, but later be-

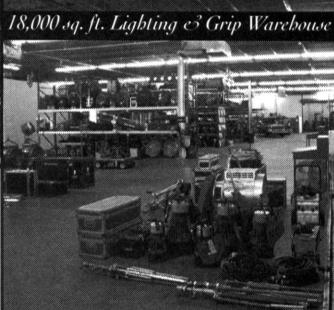
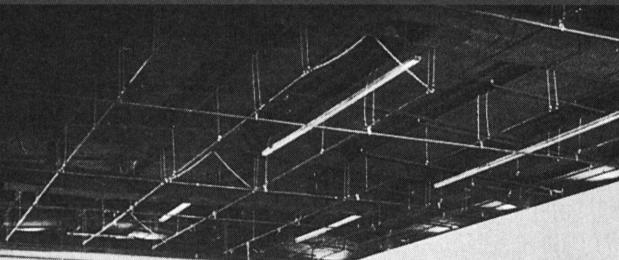
gins to detect the subversive intentions that lurk beneath the firm's polished presentation. After discovering that his telephones are tapped and that his every move is under surveillance, Van Orton realizes that CRS has engineered an intricately orchestrated conspiracy to undermine his very existence. Nothing that happens to him can be taken as coincidence, driving him to the brink of a mental collapse.

Van Orton's troubled psyche nearly reaches the breaking point when he returns to his home and finds the expansive interior strewn with glow-in-the-dark graffiti. Surprisingly, this scene was also filmed at the Filoli mansion. The filmmakers hired graffiti artist Vince Moisden to spray the walls with Wildfire UV paint, and used several Black Moon UV lights to illuminate the Day-Glo colors. (The production later paid to have the mansion's interior repainted to its original, pristine condition.) "We used the Black Moon lights in combination with Super-Blue Kino Flo bulbs," Savides explains. "We wanted the black light to come up

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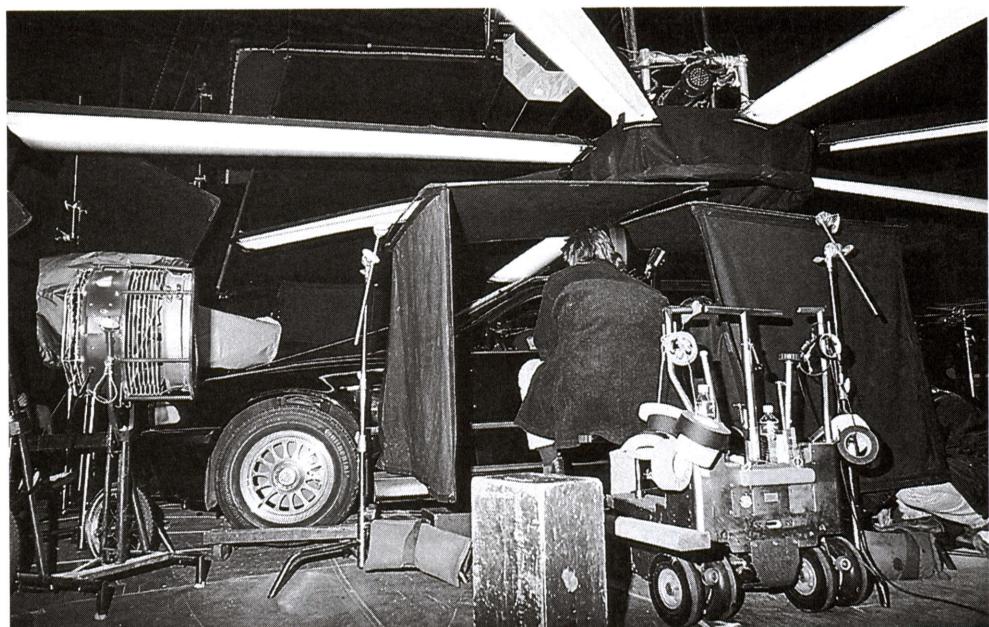
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almost instantly as Michael Douglas walks into the room. In order to create the full effect, Claudio [Miranda] had to have special scrollers made for the UV lights."

Miranda says, "We used scrollers because David wanted the lights to come on quickly. You can't do that with UV lights, because they use a special halide lamp which takes a long time to warm up. We had a special green gel that basically blocked out the ultraviolet light transmission from the lamps. I made scroll patterns that had 'stutters' in them, so they would look as if they were coming on [in stages]. To get the actual coloring of the room, we used Kino Flo bluescreen tubes. We tried to use colored gels on tungstens, but the Kino Flos seemed to work best."

One noteworthy technique which will probably go unnoticed was the filmmakers' use of rear-screen projection for key driving scenes. Determined to avoid producing footage that screamed "process," Fincher broke with a few conventions in his approach to filming both the background plates



and the screen itself. "We shot VistaVision plates with Gyrosphere stabilization at about 28 miles an hour and 12 fps," says the director. "We didn't necessarily use the same focal-length lenses to shoot both the plates and the actors in the car, but we tried to match the focus. If Michael was going to be

54" away, we shot the plates at 54"; that way, the background was pre-softened. In doing it that way instead of just defocusing at the rear screen projector, the physics worked much better. The size of the circles of confusion in the background just snapped in perfectly. You can throw a rear screen out of

Miranda's intricate rear-projection rig enabled the filmmakers to produce some exceptional process footage.

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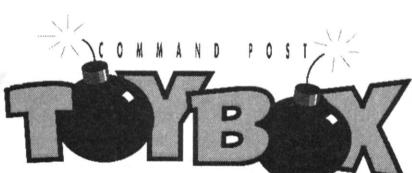
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focus, but you don't get the same dots of lights expanding the way you do when you shoot the plate out of focus. To light the actors, Claudio built this bizarre rig that had all of these Vari-Lites shooting into mirrors and stuff."

"That was probably the most complicate and expensive rig I've ever built," Miranda recalls with a laugh. "We basically built a helicopter-like contraption on top of the car. The 'rotor blades' were 8'-long Kino Flo tubes extending from either side of a 2' center; we used a brushless motor system to spin the Kino Flos and get the effect of fluorescent lights passing overhead. We originally rigged eight spokes, but ended up using just four of them to create a better light/dark effect as the blades were spinning overhead. Additionally, we had three 6'-long motorized drums, each of which had six 1' x 6' mirrored panels on them. We could angle and position those above the car with chain motors. On top of all that, we had two Vari-Lites four feet off the ground, three-quarters back from the rear projection side. Those were computer-controlled and timed to [coincide with the sources seen in] the background plate."

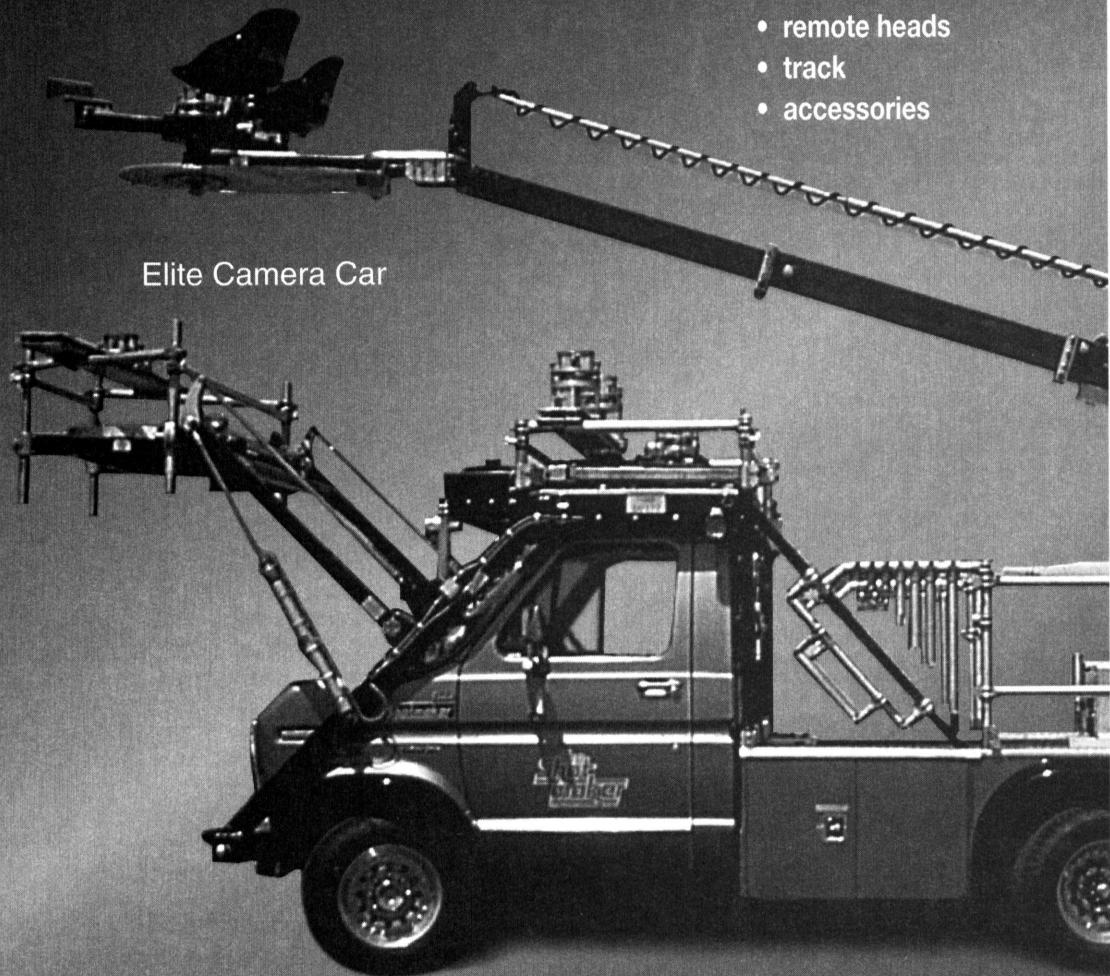
With a substantial portion of the film completed on the San Franciscan locations, the filmmakers then continued shooting on stages in Los Angeles — with sets constructed for the CRS corporation and Van Orton's office — before moving south of the border to Mexicali, Mexico to shoot pivotal scenes in which Van Orton is drugged and left for dead.

Fincher feels satisfied that he has produced a film laden with enough plot twists and ruses to keep audiences guessing, and hopes that by detailing the meticulous care that his crew brought to *The Game*, he can encourage other filmmakers to follow suit. "I think *American Cinematographer* is a forum where filmmakers can express and exchange ideas," he opines. "I'd like to use this article to urge people to do the best work they can." ♦

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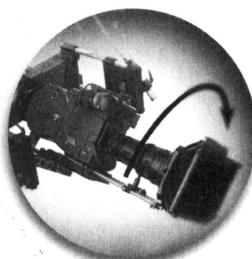
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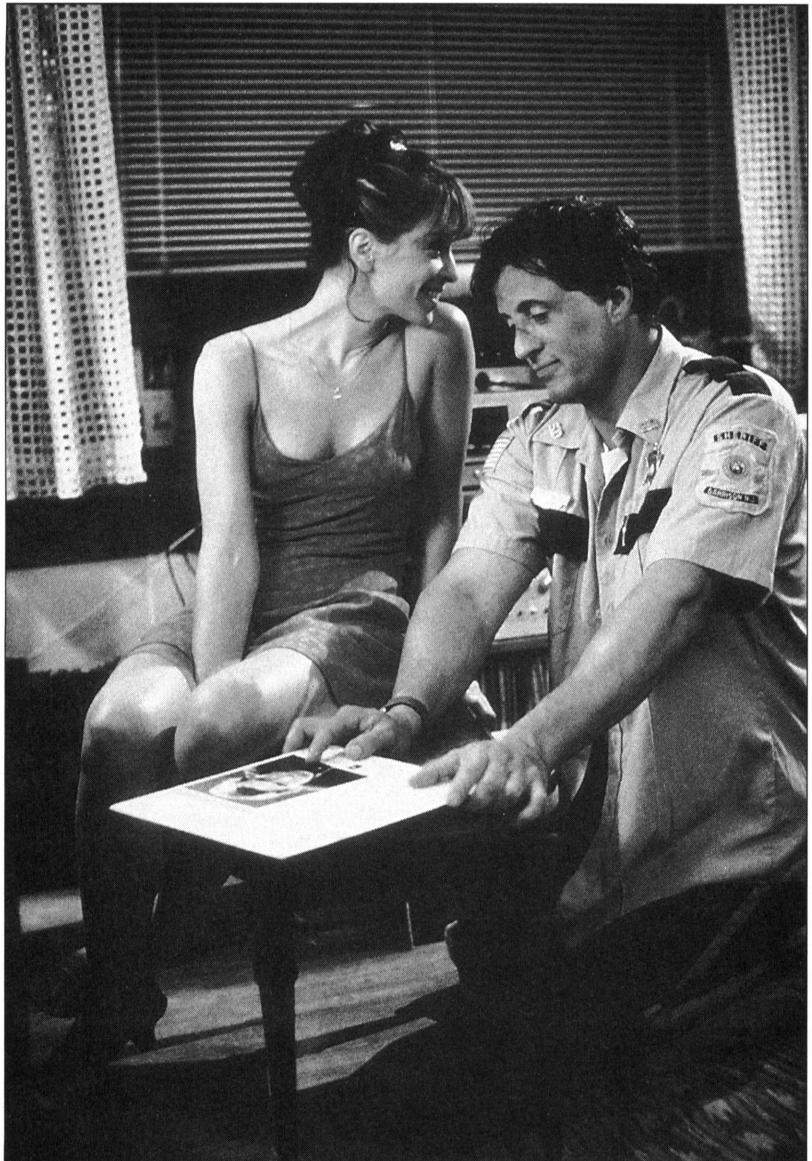
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Sheriff Freddy Heflin (Sylvester Stallone) shares a moment with Liz Randonne (Annabella Sciorra), a woman he once saved from drowning and the wife of a fellow officer.



Photos by Sam Emerson, courtesy of Miramax Films.

For most filmgoers, the term *Western* conjures up iconic movie memories: saddle-backed horses, dusty frontier vistas and stubbled faces beneath Stetson hats. Thus, it initially seems a bit curious when writer/director James Mangold says that his film *Cop Land*, about a brotherhood of modern day New York City police officers living in the New Jersey suburbs, fits into the same genre as any John Ford or Sergio Leone epic. "The great thing about Westerns was that the world was so simple," Mangold explains. "You had the Native Americans, the bad guys, the new homesteaders and the cavalry. That was the universe; there were no squabbles between different law enforcement agencies, no IRS agents, and not even any telephones. It was a pretty simple world, and that increases drama. Nowadays, any situation that arises in a movie has multiple solutions, which makes it hard to create a cleanly formal story.

"One of the things I tried to do in *Cop Land* was construct a kind of Western town in New Jersey," he continues. "People are packing their own weapons, and they live across the Hudson River from the place they fear, which they hope doesn't encroach on the new frontier that they're building at home. They've hired a local citizen to protect the town while their men go away across the river, and they're hoping that the men don't lose their lives. One of the challenges of *Cop Land* was the fact that the story does take place in a much more complex world. We were dealing with this old story structure built for a simpler world, and trying to combine it visually and plot-wise with new structures and new looks."

Cop Land stars a suitably paunchy Sylvester Stallone, who reportedly gained 38 pounds and worked for scale in order to portray Freddy Heflin, the ineffectual sheriff of the fictional town of Garrison, New Jersey. Presented as a quiet hamlet across the George Washington Bridge, Garrison is home to legions of New York City police officers. Ironically, little respect for law enforcement exists in Garrison: rogue cops carry guns,

High Noon Hits the Jersey Turnpike

Director James Mangold and cinematographer Eric Edwards lend cowboy aesthetic to *Cop Land*.

by Chris Pizzello

speed through school zones and harass out-of-towners. The hearing-impaired Heflin, who failed to make the NYPD in his younger years, spends his days directing traffic and keeping an eye on the local kids. When he discovers a web of corruption and murder among his colleagues, however, Heflin must finally stand up for the town and himself.

Mangold's first feature film, the critically acclaimed *Heavy*, chronicled the romantic longing of a painfully shy short-order cook. *Cop Land* represents an abrupt about-face in terms of subject matter. "Heavy was about people who are incredibly inarticulate, if they speak at all," he notes. "This film is about people who are extremely articulate, even if the language they use is vulgar or colorful. *Cop Land* depicts a culture that's about language, yet there is a lot going on in the scenes besides what's being said."

Mangold first sought out *Cop Land's* director of photography, Eric Edwards, 12 years ago when the young director was looking for a cinematographer to shoot a short film about three hunters in

the snowy Idaho outback. "I had seen *Last Night at the Alamo*, one of the first true independent features, which Eric had shot. It was a very interesting low-budget film, done in black-and-white and set entirely in a bar. I met with Eric in Los Angeles, and he just blew me away with his intelligence and his 'big picture' instincts about my script."

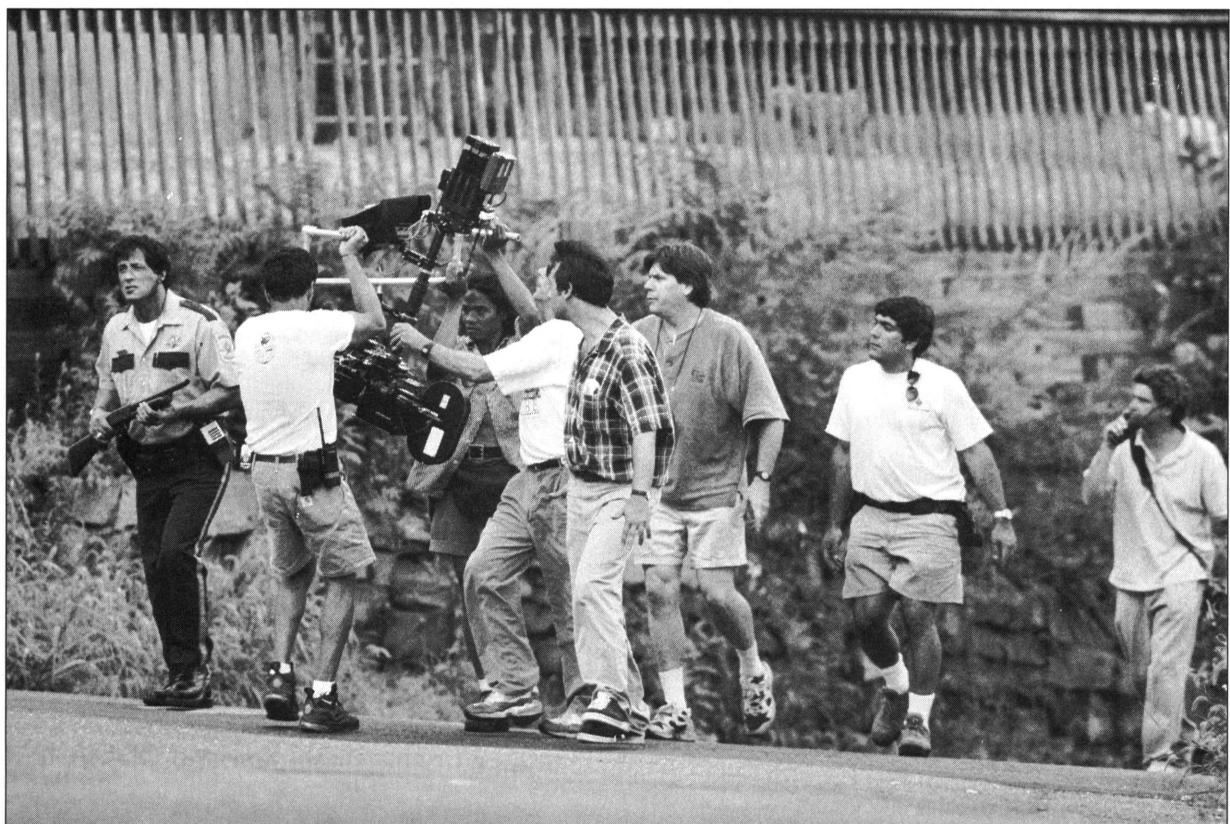
Although the short film never got made, Mangold remembered Edwards when he encountered the cinematographer 10 years later while promoting *Heavy* at the 1996 Sundance Film Festival. "Jim saw me on the street and said, 'You're going to shoot my next picture,'" Edwards recalls with a laugh. "I didn't know who he was! But then I read the script for *Cop Land* and really liked it. He wanted to see the physical nature of a Western transposed to this small New Jersey town, and I thought that sounded like a cool idea."

A native of Portland, Oregon, Edwards was an enthusiastic still photographer in his youth. During high school, he became friends with classmate and future director Gus Van Sant, and in 1971 the duo made their first movie, *The*

Happy Organ, as part of a class project. "We had a senior thesis at our school where we could do some sort of 'real world' experience," Edwards recalls. "Gus and I teamed up and made this movie, which was based on the jazzy organ song of the same name. We learned how to edit, how to A and B roll, and how to print film at the local laboratory."

In the mid 1970s, Edwards and Van Sant were both accepted into the Rhode Island School of Design. Upon graduation, Edwards headed back to Portland and quickly shot a first feature, *Property*, which became a finalist at the inaugural U.S. Film Festival. The cinematographer proceeded to shoot a variety of respected independent films, while Van Sant moved to Los Angeles and earned critical acclaim for his directorial efforts *Mala Noche* and *Drugstore Cowboy*.

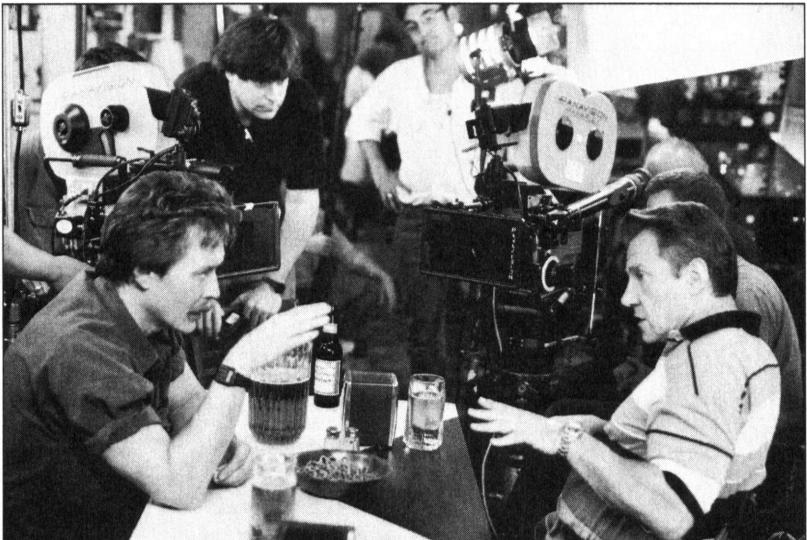
When the time came for Van Sant to select a cinematographer for his third feature, *My Own Private Idaho*, he was faced with a tough choice between two Portland-based candidates — Edwards and director of photography John



Edwards (center, in dark shirt and shorts) supervises a handheld shot executed with a custom-made rig.



Above: Internal affairs investigator Moe Tilden (Robert De Niro) bears down on Heflin. Stallone added 38 pounds to his frame to play the paunchy sheriff. Right: Director James Mangold (left) discusses a scene with Harvey Keitel, who portrays a corrupt police officer. Cinematographer Edwards (dark shirt) pays close attention.



Campbell, who had shot *Mala Noche*. Van Sant solved the problem by simply hiring both, forming an unusual arrangement in which Edwards handled the lighting and Campbell the camera operation. "I'm not sure why Gus liked the arrangement, but he must have been pleased with the results, because he asked us to do it again on *Even Cowgirls Get the Blues*," says Edwards, who later shot Van Sant's media satire *To Die For*. "I love John Campbell — he's a great friend and a great cinematographer in his own right — but the arrangement was never comfortable for either of us. In my opinion, there's a very important break in

the relationship between the director and the cinematographer, and that's the camera operator. Even now, I don't like having operators. Often the director and camera operator will go off and discuss the camera angle, and the cinematographer gets cut out of the process. To me, [operating the camera] is a central, fundamental area of communication between the director and cinematographer. I even operated the camera myself on [subsequent cinematography assignments] *Kids* and *Flirting with Disaster*."

During prep for *Cop Land*, Edwards used a color video printer to make a series of video stills from appropriately themed films as pos-

sible reference points, and then showed the results to Mangold. "I always like to establish some kind of visual dialogue with a director prior to working with him," the cinematographer comments. "I rented a lot of New York films before shooting *Cop Land*, because the aesthetics of New York City were important to this film. In [the cinematography documentary] *Visions of Light*, several of the directors of photography talk about a New York street aesthetic that was happening in Seventies cinema, which led me to watch films like *Serpico*, *Dog Day Afternoon*, and *Shadows*. We were also influenced by *Sweet Smell of Success* and its whole love affair with New York. There was an urgency and a gritty feel to that film that was really good. We also looked at Westerns like *My Darling Clementine*, *3:10 to Yuma*, *High Noon* and *Once Upon a Time in the West*. The Western always seems to be about the good American individual lining up against the collective evil of the 'town gone wrong,' and that's also what *Cop Land* is about."

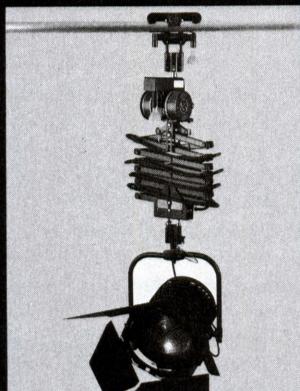
Thus, in their approach to both cinematography and production design, the filmmakers treated their Edgewater, New Jersey location (which became the fictional Garrison) like a small Western town. "The film had to take place in a 'town square' environment," Edwards points out. "We had to visually tie these buildings together by being able to see [the town] through windows. Visually, this film is almost *about* doors and windows — I shot and lit actors through doors dozens of times."

The production converted an Edgewater public water and electric works building into their sheriff's department. Production designer Lester Cohen arranged Heflin's office with an eye toward the frontier sheriffs' offices of yesterday. "Lester chose very dark, shiny and 'live' colors for Freddy's office," Edwards explains. "That particular set really had a Western look; the sheriff's office even had its own jail! The main light was provided by aiming lights through windows as much as possible."

Despite the clear Western aesthetic at work, Edwards was

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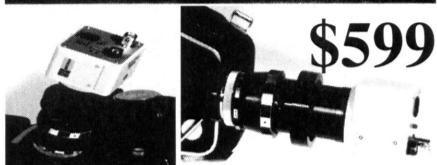
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careful not to cross the sometimes blurry line between the comfortably familiar and the trite in his lighting. "We used Arri 6K Par lights through the windows," he says. "There were some venetian-blind shadows on the walls of the sets, but I avoided using them on faces because they're such a cliché. I also tended to avoid smoke, except when I wanted to lower the contrast slightly. I basically have a 'cliché detector' that goes off in my head whenever I find myself doing something that I've seen in too many TV shows or films!"

Since the filmmakers wanted viewers to be able to see outside the windows of Heflin's office, Edwards had to constantly juggle neutral-density gels on the windows. "We had to fight the changing weather a lot," he recalls. "We had a very wet summer during shooting, with clouds constantly coming over the sun. We'd go from N3 gels to N9 and back to N6 in a matter of moments. It's tough on your producers, because they're always wondering why you're taking so much time gelling the windows. Hanging from the ceiling of the office were these four-foot fluorescent fixtures, which were remakes of an original 1950s design. [Production designer] Lester Cohen got those for us. I would just put Kino Flo daylight fixtures inside them, and balance the whole scene with the windows."

For one particularly tricky scene, Edwards and key grip Gary Martone resorted to outright illusion to compensate for the sharp contrast between the bright light of the "town square" and Heflin's fortress-like office. "Stallone had to walk through the front door of his office from the outside, and Jim wanted to see him from head to foot," Edwards describes. "We could gel the door, but not the area behind him. Gary came up with the ingenious idea of taking an 8' x 8' piece of Rosco ND material and placing it outside the door like a baffle. The Rosco material was rigged up by grip stands and fastened in place by high rollers to act as a background behind Stallone. The light came around and hit Stallone, but the 8' x 8' gel covered

what the camera saw behind him. By having the panel outside the door beyond Stallone, we managed to doctor the reality that the camera saw in a very specific way."

A much-publicized aspect of *Cop Land* was action icon Stallone's willingness to gain a substantial amount of weight to play Heflin, a middle-aged man past his prime. Despite the potentially intimidating presence of Stallone and the other luminaries in the cast (including Robert De Niro, Harvey Keitel and Ray Liotta), Mangold was determined to avoid tarting up the film's look with any reverential Hollywood touches. "Everyone in the cast kind of 'got it,'" the director attests. "My [visual] mantra on the film was 'simple, clean, don't shoot too fancy.' There's not much glamour treatment for anyone in this picture. I actually kind of wanted to flatter Sly, but he had to be filled out. He's an incredible physical specimen — very handsome, very cut, lean and muscular. My point in encouraging Sly to gain weight was not to try to make him into a kind of spectacle. In *Raging Bull*, for example, there's a sort of spectacle in the cross-cutting between the young, lean De Niro and what he became, and it suits the story. But with this film, I just wanted to transform a man who has become an icon into simply *a man*. I told Sly, 'All I want you to do is have my body' — a regular man's body!"

The actor went along with the idea, but Edwards still found it a bit uncomfortable to photograph a more human Stallone. "Stallone said to us, 'I've become aware in the last four films I've done that I can look different depending on which side I'm photographed from,'" Edwards recalls. "And it's true — no face is symmetrical. I kept dwelling on it a lot myself. It's not a 'better side versus worse side' issue, but there's a tonal difference. Fortunately, Jim said to me, 'Don't get stuck on that. We can't shoot a picture from one side of his face!'

"Along the way, however, I discovered some things about Stallone's face that I really liked. When I gave him a light from the back, it would bring out this amazing cheekbone structure he has,

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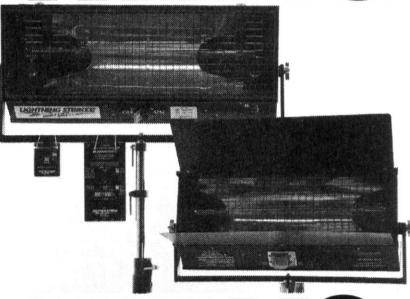
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which made him look like an old cartoon drawing of Dick Tracy. With the extra weight added, his face became a far more complex landscape — there were volumes in his face that don't exist when he's thin. I found the shape of his ear interesting, as well as his filled-out cheeks. In general, I would use hard light from the side or back on Stallone, because I wanted to see the textures in his face. There's a lot of 'afternoon' lighting on him, because his character is in the afternoon of his life.

"Of course, from a photography standpoint, we're still talking about a dangerous situation," the cinematographer adds. "You're dealing with a powerful industry star, and you're messing with his face, which is the feature he's built his whole career around. I took some chances in letting side backlight come off his face, because that technique brought out textures that another cameraman might have avoided."

In *Cop Land*, the big-city police officers Heflin lives among are his idols, but he is excluded from their "brotherhood." Mangold and Edwards were conscious of setting Stallone apart from the other actors compositionally to highlight his character's alienation. In one scene, Stallone is seen as a mere foreground reflection in the window of a deli as a group of NYPD officers huddle together inside. "We had to flag out the camera so its reflection wouldn't appear in the window," Edwards explains, "but we still had to get light back through to Stallone, so outside I bounced some Arri 6K Pars off Griffolyns. We had to hold the actors in the background as well, so the focus was at a really deep stop, either f8 or 11. The result is almost like a split-diopter shot! We had 12K Fresnels coming through the windows to pound the actors inside with light, and we also had 6K Pars bounced off the suspended ceiling tiles of the store. I used $\frac{1}{4}$ CTO on the lights inside the deli, since I always try to shift color [within a scene] when I can. I usually work with very fine shades; I never carry full orange on the truck. I carry $\frac{1}{8}$, $\frac{1}{4}$ and $\frac{1}{2}$ CTO, and I just

double them up if I need the effect of a full gel."

Recalling the scene in question, Mangold says, "One of the things I warned Sly about before we started the movie was that he was sometimes going to find himself in the background of scenes. Part of the point we're trying to make is that Freddy is *back there*, pushed away from the whiteness of the action. There's drama going on, but he's on the fringe. I told Sly, 'You're going to have to be patient, because there's going to be some intense conflict going on that you are somehow separated from.'"

As he had done on *Heavy*, Mangold wanted to present as much of the story as possible in static, painterly frames. He and Edwards generally avoided placing zoom lenses on their Panavision cameras, opting instead for wide-to-normal Primo primes. "My love of primes is twofold," the director states. "First, they're very sharp, and they're faster. But beyond that, a zoom lens has a very strange way of making you indecisive. If you want to change the frame a little, all you have to do is turn a ring, and to me there's something cheap about that. With primes, if you want to be closer, you have to physically move closer. I don't want to sound too Zen about this, but there's something about the physical act of moving around a room to get the shot; it lets you feel the way your camera is dancing through the scene."

Mangold and Edwards avoided excessive camera movement, however, except when the natural flow of the story dictated a sense of motion. At one point, Steadicam operator Rick Raphael tracked Stallone through an entire shot in which the actor exits a New York subway car, makes his way through the darkened station and climbs up a flight of steps, emerging before the looming edifice of New York's City Hall. The smoothly executed sequence evokes the unmistakable Western-tinged idea of a decent man walking toward his destiny. "It's the 'showdown' shot!" Edwards exclaims. "You see the world over Stallone's shoulder,



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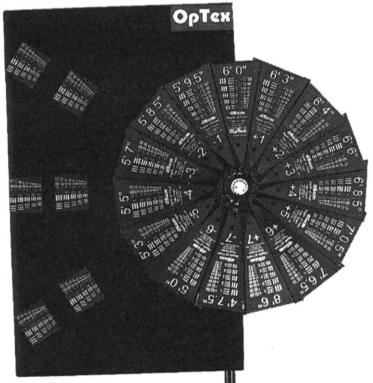
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and at the end of the shot there's this monolithic building spread out in front of him. That was one of the physical things we did to reinforce the story. Through camera placement, you can make a character appear weak or vulnerable in a large, oppressive world."

Likewise, an appropriately spooky mood pervades a night scene set near the backyard pool of one of NYPD officer Ray Donlan (Harvey Keitel), where he and a few of his brethren have gathered to drown Murray Babitch (Michael Rappaport), a younger cop embroiled in controversy. "That was a situation where we were stuck up against a wall, and sometimes you just have to punt," Edwards recounts with a chuckle. "But sometimes when you punt, you discover things. There was an existing pool in the backyard of our location, but it was very ugly." To solve the dilemma, the filmmakers joined the backyards of two adjacent homes to film the scene. The cameraman recounts, "We brought in one of those raised, above-ground pools, which would be more in context with these working-class cops. Then we blocked out the house next door, since we were trying to make the scene look as if it was set in the Keitel character's backyard. We put our 'nighttime street/moonlight,' an 18K HMI Fresnel with $\frac{1}{2}$ CTO, in a 90-foot bucket over the [first] house. The light just crashed over the back of it through some trees, putting the [second] house into silhouette.

"We toyed with the idea of putting lights inside the pool, but decided against it because [above-ground] pools don't have lights inside them. Instead, I ended up putting a 1200-watt Par on a regular lampstand right at pool level, where we could skim it along the water. The scene then picked up these watery reflections from the Par light, which became this evil, sinister backlight on the cops."

Since *Cop Land*'s story leapfrogs between two very distinct worlds — the sprawling metropolis of New York City and the comparatively placid New Jersey suburbs — Edwards decided to delineate the nocturnal look of

each environment. "In Heflin's little world on the Jersey shore, we gave the night scenes a warm look," he explains. "In Edgewater [Garrison], I would utilize the available sodium-vapor lights, and color my own lamps with CTO and straws to go toward and beyond that orange look.

"For the New York scenes, we were inspired by *Sweet Smell of Success*, in which the city had all of these very hard surfaces; it always seemed as if it had just rained. So on *Cop Land*, we wet down the streets in New York to try to make the city shine and glisten. We also tried to make the scenes look steely cold by imitating the [blue-green] look of mercury-vapor lights. Of course, there are no mercury-vapor lights anymore in Manhattan — every city in the U.S. has sodium-vapor lights now. But during the Seventies, when all of those fine New York films were made, there were still mercury-vapor lights, so there was a lot of blue and green in the night scenes of those pictures. In our New York scenes, I mixed my blue HMIs with mercury-vapor lights."

Edwards opted to employ Kodak's Vision 5279 stock for the night scenes, and 5293 for daytime environments. The cinematographer reports that he was pleased with the new color rendition in the Vision stocks, and confirms that the black hues are as strong and consistent as ever. "For years, Kodak had this dogmatic loyalty to technical reality," the cinematographer attests. "They were obsessed with creating a red, blue and yellow layer that faithfully recorded what the world looks like, but I hate blue light! Throughout the years, cameramen have gone to every length possible — UV filters, polarizing filters — to avoid what blue light does to the atmosphere. Kodak films in the past recorded blue light so strongly that you were stuck with it, even if you didn't like the way it looked.

"The Vision stocks have shifted more to the warm red and yellow side. They're far more human stocks. Kodak has finally come up with something that responds to human emotion, as opposed to something that was just a

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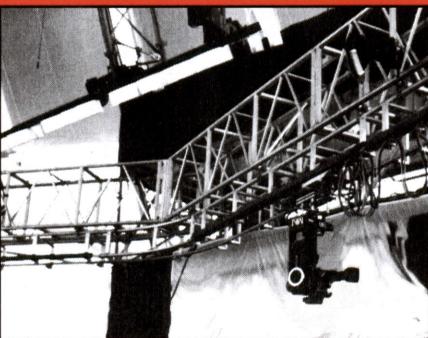
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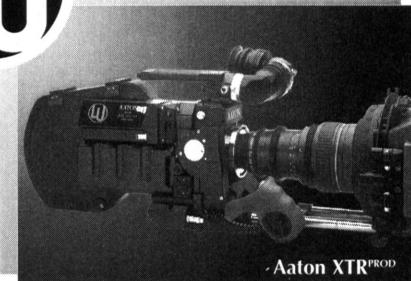
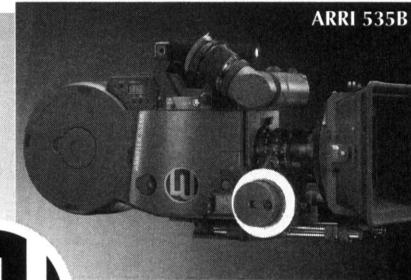
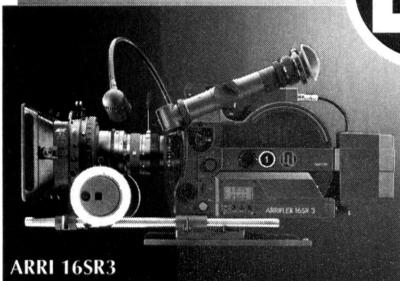
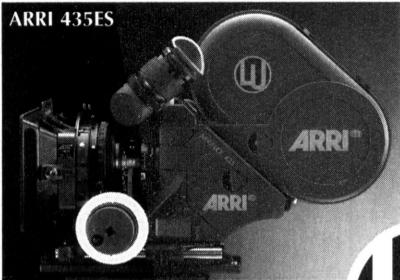
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The warm-toned 79 film was the perfect canvas for a chaotic night scene set on the George Washington Bridge, where an array of police cars and officers converge to investigate a shooting involving the ill-fated Babitch. "Almost the entire scene was lit with red magnesium road flares," Edwards says. "The light they give off is this strange, eerie cross between a campfire and a welding torch. I ran around with the props guys and just laid several hundred road flares everywhere. We had some elaborately choreographed Steadicam shots on the bridge, so we just placed the road flares as if we were walking along the characters' path. They're amazingly bright, and they have a flickering strobe that you just can't imitate with any kind of machinery. I also used a lot of incandescent bulbs and fixtures, mostly tungsten Par lights, in addition to the red cherry tops on the police cars and the yellow strobes from the medical vans. We mixed the tungsten light with the strong red light from the flares. The whole scene became its own aesthetic — it was like lighting for *Dante's Inferno*!"

Asked to assess the difficulty of blending two seemingly disparate genres — the Western and the "New York City cop film" — Mangold points out that the classic elements of the latter will always survive, regardless of a movie's milieu. "I never focused too much on the cop-movie aspect of this film," the director says. "I figured that the locations, costumes and acting would pull the viewer naturally in that direction. If you make the typical [cop-oriented] film, you're going to end up shooting the same film that all the directors before you have shot. If there was anything new I was trying to bring to the table, it was this storybook, Western aesthetic.

"But then, I think a movie like *The Verdict* is a Western, *Norma Rae* is a Western, and *The Third Man* is, in many ways, a Western. Those movies [depict] very simple universes in which elaborate morality plays unfold."



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the police that Casanova is still holding several other women — Cross' niece among them — but has no idea where the killer's lair can be found.

Photos by Kimberly Wright, courtesy of Paramount Pictures

Schneider and director Gary Fleder (*Things to Do in Denver When You're Dead*) kept in mind that *Kiss the Girls* was following on the heels of two fairly recent thrillers of a similar vein, *Seven* and *Silence of the Lambs*. Both pictures made unusually strong impressions on audiences, and the filmmakers wanted to avoid any comparisons. "Seven was an incredible film, but every frame of it seemed to express the inevitability of doom and decay," says Fleder. "I wanted to make a film that was dark and moody, but which felt inherently hopeful, as if there was a chance of redemption for humanity."

With this tack in mind, Schneider had to help Fleder capture the excitement of the action genre and the grimness of the subject matter while still presenting the emotional depth and richness of a character-driven story. The cameraman remarks, "There was constant effort to balance between lighting for the visceral twists of a thriller and lighting for a grounded, reality-based human drama."

After studying mechanical engineering at Iowa State University, Schneider transferred to the USC School of Cinema-Television, where he befriended fellow classmate Fleder. After graduating

Casting Murder in a New Light

Director Gary Fleder and cinematographer Aaron Schneider bring a unique *modus operandi* to *Kiss the Girls*, a thriller that tracks the path of an amorous serial killer.

by Jean Oppenheimer

After earning two consecutive ASC Awards for his work on the TV series *Murder One* (see AC May 1996 and '97), director of photography Aaron Schneider was eager to shoot his first theatrical feature. He got his chance with *Kiss the Girls*, a suspense thriller about a police forensic psychiatrist and a young medical intern who join forces to track down a serial killer.

Set in North Carolina, the picture was shot in just over 50 days; the production spent two weeks of the schedule in Durham, and the rest in Los Angeles. The story begins as Dr. Alex Cross (Morgan Freeman), a Washington

D.C. detective, arrives in the Raleigh/Durham area to investigate the disappearance of his niece. Several other college-aged women in town have also vanished, and two have turned up dead. Shortly after Cross arrives, a young doctor, Kate McTiernan (Ashley Judd), is abducted and taken to an underground lair. Her masked kidnapper, who calls himself Casanova, tries to seduce her, apparently believing that he can make his victims fall in love with him. McTiernan manages to escape, running through a forest and jumping into a river that carries her downstream to safety. She informs

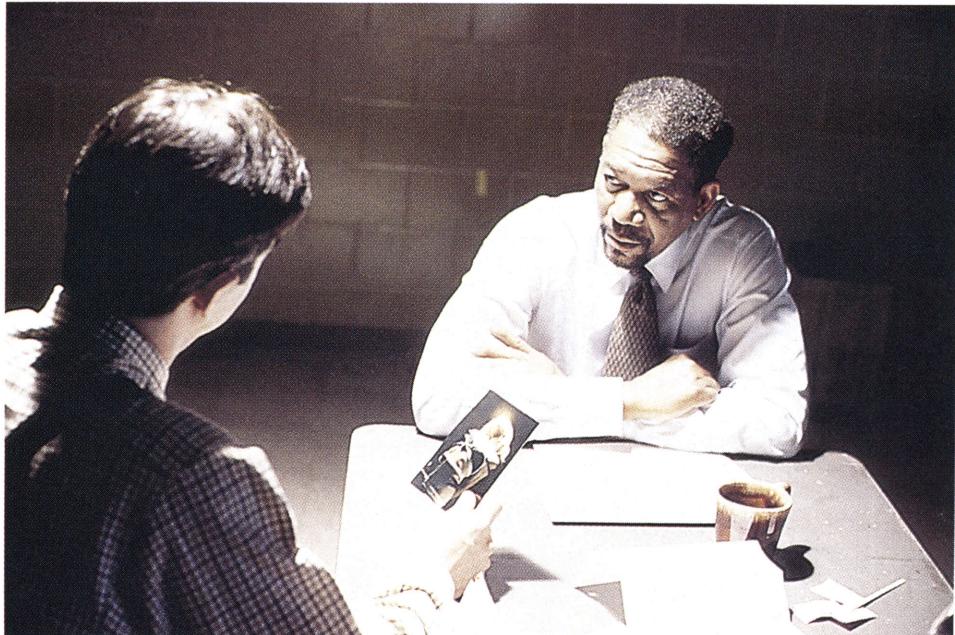
Above: *Kate (Ashley Judd) awakens to discover an intruder in her home.*

Throughout the film, Schneider helped suggest a feeling of tense unease with cyan-tinted lighting, a motif used to represent the presence of evil. Right: Detective Alex Cross (Morgan Freeman) enters Schneider's blue-green forest, a color scheme inspired by a hand-tinted Civil War-era photograph found by production designer Nelson Coates.



in 1988, Schneider shot a low-budget straight-to-video slasher picture. "I was trying to make art, but the other guys involved just wanted to sell it and get some distribution," he recalls with a laugh. Sidestepping the traditional climb from assistant to operator to director of photography, Schneider somewhat sheepishly admits, "I was a bit arrogant. I thought, 'I'll just graduate and call myself a cameraman.'" Several lean years followed, during which Schneider took any production job that would help him learn his craft. As a result of this dedication, he began landing assignments to shoot commercials and music videos.

Schneider's big break came after Carl Bressler, his agent at the time, sent the cameraman's reel to producer Steven Bochco,



Above: Cross questions a suspect in the Casanova killings. A strong top light suggests his growing anger throughout the scene before burning out to white as his rage boils over.
Left: Kate and Cross confer in a hospital corridor draped in shadows.



who was then preparing the series *Murder One*. The director of the series' pilot, Charles Haid, was impressed with Schneider's reel and offered him a job as director of photography. "Charlie took a real leap of faith, because I had little to no narrative filmmaking experience," admits Schneider, who wound up shooting 10 episodes of the series.

Kiss the Girls allowed Schneider and Fleder to indulge their affection for the suspense movies of the 1970s. One of their visual influences was *The Exorcist* (photographed by Owen Roizman, ASC), a film that creates an effective sense of unease and the unseen

presence of evil via camera movement and point of view. Another key reference was *Klute*, the detective thriller shot by Gordon Willis, ASC, who employed his trademark top-light style on the picture. "Willis' movies are always interesting to study for composition," notes Schneider, who points out that *Klute*, like *Kiss the Girls*, was shot in anamorphic. "That film is a fantastic lesson in composing a frame in thirds," he notes. "Willis cuts the frame either horizontally or vertically — [with the lines] delineated by some object, person or graphic in the frame."

Schneider deviated markedly from Willis' style in his cam-

era movement on *Kiss the Girls*, however. Whereas the veteran cinematographer has a well-known preference for a "mounted proscenium," Schneider constantly kept his Panaflex moving; approximately 30 percent of the film was shot handheld. Notes Schneider, "David Boyd, who has been with me since *Murder One*, did a fantastic job with the handheld work, especially in the anamorphic format — which isn't easy." Andrew Casey and Bill Brummond provided Steadicam for another 30 percent of the picture.

Fleder wanted the film to have a slightly off-balance feel, but he didn't want an obvious handheld look. He explains, "We took pains to throw the horizon off as much as possible so the viewer would never feel quite stable, but I prefer a kind of floating handheld, where you get a sense of danger and a tense feeling that anything can happen in the frame."

When it came to devising a lighting design for *Kiss the Girls*, Schneider drew more inspiration from his heroes: Willis, Roizman and Conrad Hall, ASC. He describes this trio as cameramen who "make beautiful light out of truthful choices."

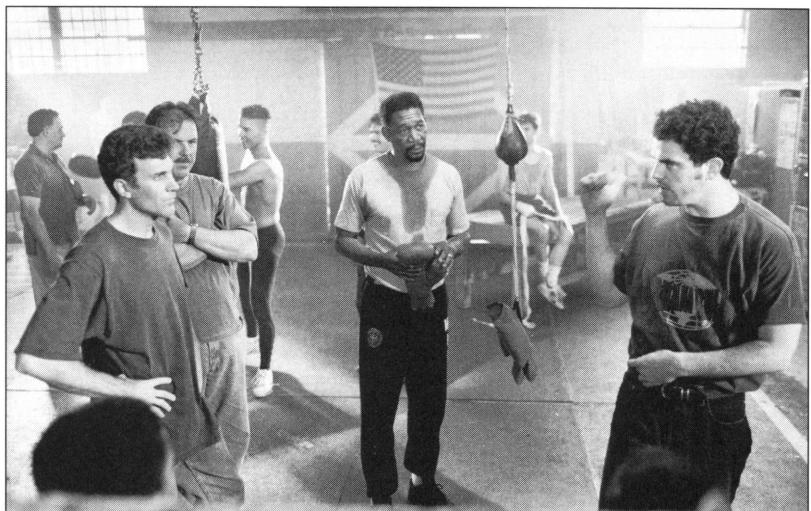
By "truthful," Schneider means lighting that is appropriate to the dramatic content of a scene. To illustrate the point, the camera-



Above: The crew shoots on location near Raleigh, North Carolina. Schneider found that Kodak's 500 ASA 5298 stock allowed him to shoot in anamorphic at comfortable stops even in heavily shaded, dense-foliage areas. **Right:** Schneider (far right) discusses a scene with director Gary Fleder as Morgan Freeman stands nearby.

man describes a scene in *Kiss the Girls* in which Dr. Cross angrily throws a suspect against a wall in a police station interrogation room. Other cops then rush in and separate the men. The set was illuminated by a single practical lamp and a bit of fill. When the men are pulled apart, Cross is standing directly beneath the practical source, with the intense glare of the light washing over him. Schneider was initially worried that the intense highlights might be too hot, but soon realized that the look conveyed the emotional content of the scene perfectly. "We didn't stage the scene to have Morgan Freeman go under the light; it was just a fortunate case of serendipity," the cinematographer admits. "But when I saw that this really toasty light matched his anger, I took advantage of the opportunity."

Another example of imaginative source lighting is a scene set in Kate McTiernan's dungeon cell, which was ostensibly lit by two candelabras set at opposite sides of the room. To create a supplemental candlelight effect, Schneider used six Chinese lanterns, each of which contained three small tungsten bulbs running off of separate flicker generators and pulsating at different rates. He then made two separate clusters of three balls each and placed them near the respective candelabras, just off camera. "The net result is that the image is



still dark, but it's a dingy-dark rather than a crispy-dark," he explains. "The scene is evenly lit with softer shadows, as opposed to the deep shadows that would result from using a single lamp. I wanted the scene to feel murky, and I thought I could do that by simulating a lack of contrast and then having the lab print it down to create a sense of overall darkness."

Over two-thirds of *Kiss the Girls* takes place either in the darkness of Casanova's underground hideaway or outdoors at night. The exterior scenes, many of which occur in the forest, relied exclusively on moonlight effects, since there was no other motivated source.

Influencing this lighting approach was a Civil War-era pho-

tograph of the White Oaks swamp in Virginia that production designer Nelson Coates (*Universal Soldier*, *Three of Hearts*, *Things to Do in Denver When You're Dead*) found during his research. "Nelson was an invaluable contributor to the look of the film," notes Schneider. "This particular photo that he found was spectacular." The hand-tinted still was cast in a haunting cyan. The misty, blue-green foliage in the shot inspired Schneider and Fleder to apply the same color to their forest. Toward that end, the cameraman used Condor-mounted HMI's to simulate moonlight, and added green gels to create a cyan look. "My gaffer, Dwight Campbell, helped to create a series of gel swatch-books that included mixtures of primary colors,"

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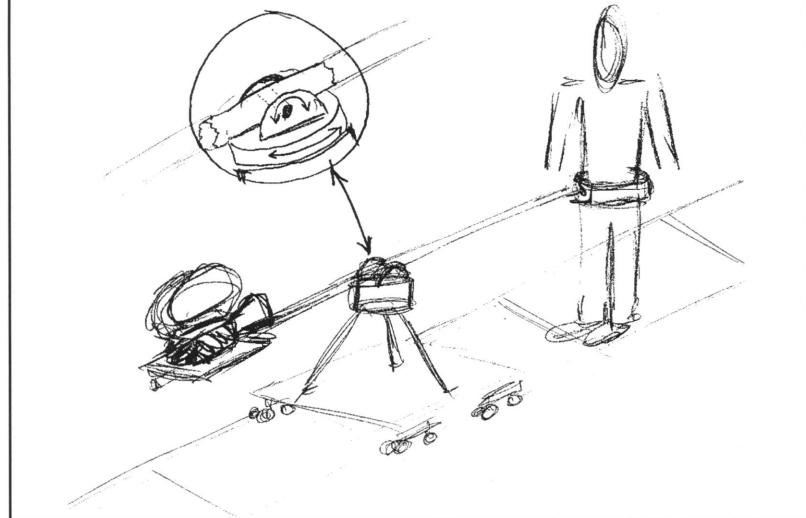
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added a bit of fill [as moon ambience] to open up the shadows."

To extend this cyan motif to the forest's day exteriors, Schneider employed a combination of camera filtration and a color timing trick he learned back in his USC days from Allen Daviau, ASC. The cameraman explains, "Cyan is a mixture of blue and green. To define the blue element, I used an 81EF in 5600°K daylight. Normally, when filming in daylight with a tungsten stock, one would use an 85 filter to correct for this color temperature. But an 81EF only corrects halfway back, which gave my negative an extra bit of blue. In addition, I put a magenta filter on top of the lens when I shot my gray card. When creating dailies, the timer has to take all color out of the gray card so it's devoid of any color bias. In order to take the magenta out, the timer has to put in green. The 81EF gave me the blue element for creating the cyan, while the color timer gave me the green element I needed. My dailies timer, Ron Koch at Deluxe, kept a watchful eye over this process, and proved invaluable in following through on this effect."

Cyan later served as a psychological signal of the killer's presence. Whenever the action shifts to the forest — or when the killer is more directly present, as during a scene in which Kate McTiernan awakens and senses that someone is lurking in her house — Schneider would subtly place an element of cyan-blue

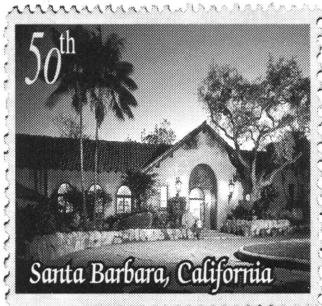
Schneider's sketch of the "teeter-totter" camera mount designed and built by operator David Boyd and key grip Kevin Widowski.

within the frame. The trick works on an almost subliminal level; whenever cyan creeps into a scene, the viewer will begin to feel uneasy.

The picture's anamorphic format added to the challenges facing the filmmakers. Although Schneider had previously shot an anamorphic music video for rap artists Ice Cube and Dr. Dre (for the track "Natural Born Killas"), Fleder had never worked in the 2.35:1 aspect ratio. Says the director, "Aaron wanted the crispness and density of anamorphic, and we agreed that the 2.35 frame is fantastic for thrillers because it has a built-in sense of drama. The frame is unsettling because it heightens the sense of being off-kilter. You can create tension simply by framing somebody a certain way in close-up."

The downside of anamorphic is that it leaves less room for flexibility in terms of both focus and lighting. While shooting *Murder One*, Schneider's approach was to light by eye and then use a meter to determine his exposure, which generally led him to shoot at T2.5. But, he notes, "you can't shoot anamorphic at T2.5, because it has no depth of field." As a result, Schneider found himself constantly boosting his light levels during the *Kiss the Girls* shoot. "Suddenly, the luxury of being able to just look at my lighting by

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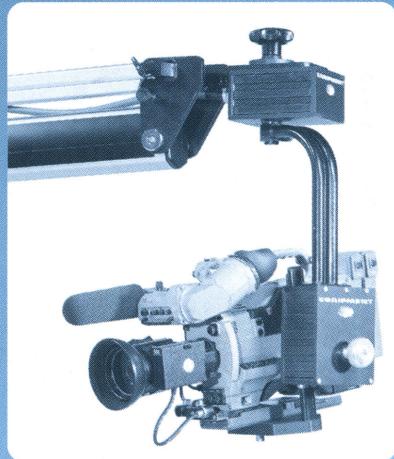
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eye and say 'This feels right to me' was gone. I had to start thinking technically. I found myself saying, 'Well, that's a T5.6 and brighter than hell, but I know it's going to be underexposed a stop.'"

Schneider elected to shoot the film entirely on Kodak's 500 ASA 5298 stock, because he felt that the anamorphic lenses needed the stop. He also didn't want to risk cutting to a finer-grained stock. "Picture quality is relative within a movie," he explains. "If you don't show the viewer a deeper black or a finer grain, they will accept what they see as the standard." To accommodate his use of the 98 on bright day exteriors, Schneider utilized ND filters.

"In a forest, you have ambient light underneath the canopy of trees that is not as bright as you'd think it would be," he notes. "So even though I was shooting 98, if I was exposing for the shadows in the forest I might be at T5.6 or 8. I wasn't going to stop down any further than that on an anamorphic lens. Phil Radin at Panavision provided us with wonderful sets of

both Primo and E-series lenses. I generally wound up shooting at between T3.4 and T4 with them."

Helping Schneider with the tricky anamorphic work were camera assistants Terry Phrang and Brian Armstrong. The latter pulled focus for cinematographer Jan DeBont, ASC on *Die Hard*, a challenging anamorphic film known to have been shot at very shallow stops.

For close-ups, Fleder generally wanted to shoot with the camera tight in on the actors and fitted with wide lenses. "I think that doing a close-up with a 40mm or 75mm [with spherical lenses] creates a real sense of intimacy," he says. Anamorphic lenses do not focus as closely as flat lenses do, however, so Schneider used a diptor whenever Fleder wanted an extremely close shot. "Anamorphic makes you focus on a single person or object in the frame, because the depth of field is so shallow," Fleder adds. "I really like that. I think that the shallow depth of field really helped on this film, because to a great extent it is about what you

don't see."

Just about everything that the main characters Cross and McTiernan encounter, however, is shared with the audience. "We didn't shoot anything without doing a POV shot," Schneider says with a laugh. Fleder wanted the story to shift back and forth between subjective and objective views in order to draw viewers deeper into Freeman and Judd's characters. He was equally adamant about avoiding the cliché of the "killer's perspective" so prevalent in suspense and horror films. Consequently, shots from Casanova's POV were kept to a minimum.

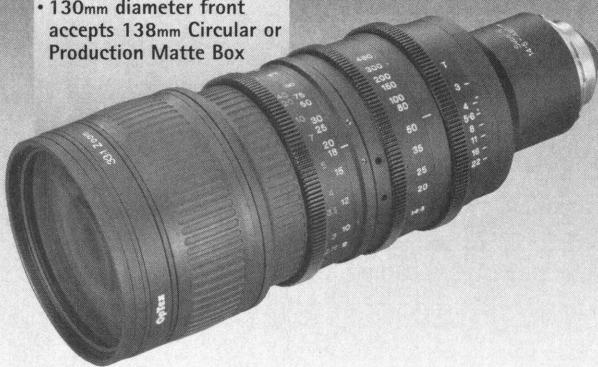
In one of the film's most arresting images, the camera's perspective changes right in the middle of a shot, as McTiernan escapes from her cell and runs out into the daylit forest. Since she is encountering sunlight for the first time after four days of captivity in the dark, she is partially blinded. As she exits the tunnel (seen in a Steadicam shot representing her POV) everything burns out to

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white; the outline of the trees is barely discernible as McTiernan's eyes adjust to the harsh light. "We used a remote-control aperture system to simulate that effect," explains Schneider, who ran alongside Steadicam operator Andrew Casey during the shot. "I cranked the aperture open five stops at the head of the Steadicam shot, so all of the subjective/POV stuff where Ashley is disoriented was five stops overexposed. The camera then whips around 180 degrees to simulate her view as she looks back to see if Casanova is chasing her. As the camera comes forward again — in another 180-degree whip-pan — the once-subjective shot becomes *objective*, revealing Ashley looking back over her shoulder. As the shot becomes objective, the exposure returns to normal by means of the remote aperture control — all within the same shot."

In an earlier scene involving Dr. Cross, a very different technique was used to draw the audience into the character's thoughts and feelings. Shortly after the

detective arrives in Raleigh, a woman's body is found tied to a tree. Cross accompanies the police to the crime scene, not knowing if the victim will turn out to be his niece. "We wanted to get in on his face and make his walk from the car to the body intensely subjective," Schneider says.

To achieve this emotional effect, the filmmakers attached Panavision's FTZSAL speed-control unit to Schneider's Panaflex GII, which can ramp the camera's speed from 24fps to 48fps in the same shot while maintaining constant exposure. As Cross heads toward the crime scene, the frame rate gradually climbs from the normal 24fps to 48fps, suggesting a heightened sense of anxiety. Subsequent POV shots of Cross' approach to the body and his detailed examination of the crime scene were also filmed at 48fps.

The filmmakers further enhanced the feel of the scene by using a device that Schneider dubbed "the teeter-totter cam." This see-saw-like contraption (see diagram on p. 70) was set atop a

doorway dolly, with the camera on one end and Freeman strapped to the other via a belt around his waist. This ensured that the camera would remain equidistant from the actor for the entire shot. Furthermore, the camera would do the opposite of everything Freeman did; whenever he turned to the right, the camera would swing to the left; if he knelt down, the camera would go up. Fleder explains, "We really wanted to get a sense of being locked into his internal thoughts to show his sense of disorientation."

Designed by operator David Boyd and key grip Kevin Widowski, the teeter-totter cam worked as planned after a few minor bugs were ironed out. At first, there was too much play where the teeter-totter joined the belt at Freeman's waist. The veteran actor offered a simple solution: instead of wearing the waist belt, he took his end of the teeter-totter in his hands and held it to his stomach during each take, eliminating the play in the rig. "Morgan was very generous to my crew and me,"

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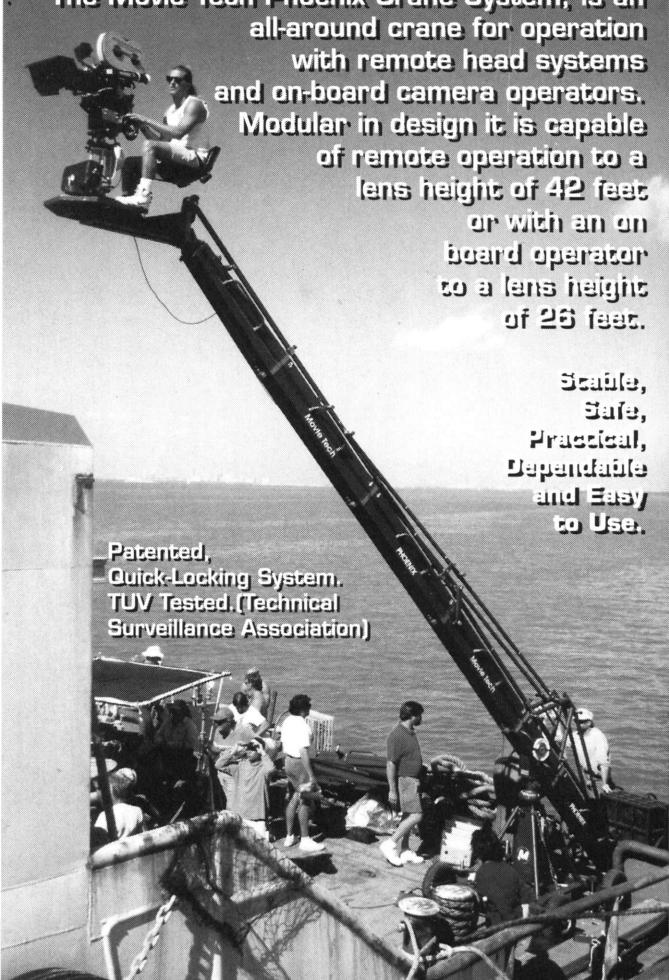


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Schneider reports. "He's the first to offer a small adjustment in his performance if it makes anyone's job a little easier."

For another ambitious shot, the camera was placed on a 360-degree dolly track so it could circle a group of detectives as they stood talking in a hotel lobby. The camera was in constant motion throughout the three-minute scene, and Schneider describes the shot as the film's toughest. "We had a 180mm anamorphic lens on a 14-foot diameter track, panning from actor to actor at T3.5 with not much more than an inch of depth of field. It proved to be a sort of 'catch-as-catch-can' affair because of the timing involved between the circling dolly and the actor's lines. We had to take an improvised 'dot-to-dot' approach to capture the dialogue in a very particular order. To some degree, everyone had to fly by the seat of their pants."

Fleder found the difficulty of maintaining lens focus to be the most frustrating aspect of the whole production. "Anamorphic is certainly a challenge in terms of focus, especially when you're using longer lenses moving to and from objects, off-axis and on-axis." Getting tighter shots with wide lenses was no easier. Asked if he would work in anamorphic again, the director demurs a bit. "The jury is still out for me," he says. "I love the way *Kiss the Girls* looks, and I think it's a better film because of the format. But I never quite felt safe with anamorphic."

Schneider evinces no such doubts, despite the frustrations he also experienced. "It just takes discipline, patience and an understanding of the anamorphic format to take advantage of its effects and to use it properly," he says. "I try to remember that movies are not perfect works of art. Perfection is a noble aspiration, but it has never been humanity's strong suit."

Schneider concludes this thought by paraphrasing Conrad Hall: "Life and movies are not about perfection. They're about the beauty and excitement in life's imperfections, and the joyous happenstance of accidents." With a smile, the young cinematographer adds, "Amen." ♦

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Behind the scenes, of course, are the craftsman who help to create this burgeoning form of movie magic. With its technological conglomeration of "inverse kinematics," "NURBS," and "super-quadratics," the world of digital imaging can be daunting and perplexing; nonetheless, it is a world that the modern director of photography must thoroughly understand. "It's important to have an understanding of how the CG process is going to work," maintains David Stump, a visual effects cinematographer who has lent his talents to such cinematic adventures as *Alien³*, *Mars Attacks!*, *Batman and Robin*, *Contact* and the upcoming *Sphere*. "Even the simplest wire removals become very difficult if you don't understand how someone is removing the wires while they're sitting at a computer. You don't need to know script-writing and command chains, but if you have a good overview of how they're creating their layers and mattes, how they create the 3-D environment, and how they texture-map and light in the computer, then you can give them the pieces they need more easily."

Just as a cinematographer makes choices about lights, stocks, and lenses, the men and women of visual effects have their own specialized tools. Christian Rouet, a senior technology officer at Industrial Light & Magic, is responsible for all software developments in the firm's digital production areas. He and his team were recently honored with an Academy Award for Technical Achievement for their development of software that generated realistic fur for the creatures in *Jumanji*. Commenting on the necessity for continuity in the use of software tools for every project, Rouet says, "We have worked to build an architecture at ILM that

doesn't change from movie to movie. Of course, the tools evolve over time, but for the most part they are always the same."

Since its genesis, ILM has evolved with (and occasionally set the standards for) the onslaught of digital technology. While ILM has authored many of its own software

"We use Softimage for all our primary animation, [which is] the movement of a character skeleton," explains Rouet. Founded in 1986, Softimage was originally designed by animators, for animators. Up until that time, most of the software available for 3-D animation was cumbersome, crude and al-

Rendering New Worlds

A variety of CG software programs have helped visual effects experts transform filmmakers' fantasies into cinematic spectacle.

by Jay Holben

(Part 1 of a two-part series that will conclude in our December special effects issue.)



A stained-glass knight confronts a priest suffering from hallucinations in *Young Sherlock Holmes*. The scene was one of the first examples of CGI in a feature film, and the research behind it helped develop several software programs, including RenderMan.

programs and applications, they are never hesitant to use a commercially available system when it meets their strict requirements. "If we can save time and not have to build it ourselves," Rouet explains, "then we will certainly buy whatever we need; we will buy what we can and create what we cannot."

One of ILM's key creative tools for animation is Softimage.



most purely mathematical. The release of Softimage inspired most of the advanced capabilities now commonplace in the industry, in-



cluding inverse kinematics and numerous motion-capture technologies. In 1994, Softimage was acquired by the software titan Microsoft, which helped to make the package more readily available to users across the industry. Microsoft ported Softimage to their Windows NT platform, and they continue to keep the original UNIX version updated with simultaneous releases for both platforms. At present, Microsoft is pushing Softimage into the next century with a new package called Sumatra, which will be one piece of a much larger puzzle that will enable end users to take a project through each stage of postproduction with a single system, including 2-D and 3-D artwork and animation, non-linear audio and video editing, image effects and rendering.

The capabilities of Softimage were illustrated to great effect in ILM's work on Rob Cohen's medieval epic *Dragonheart* (see AC June '96). In

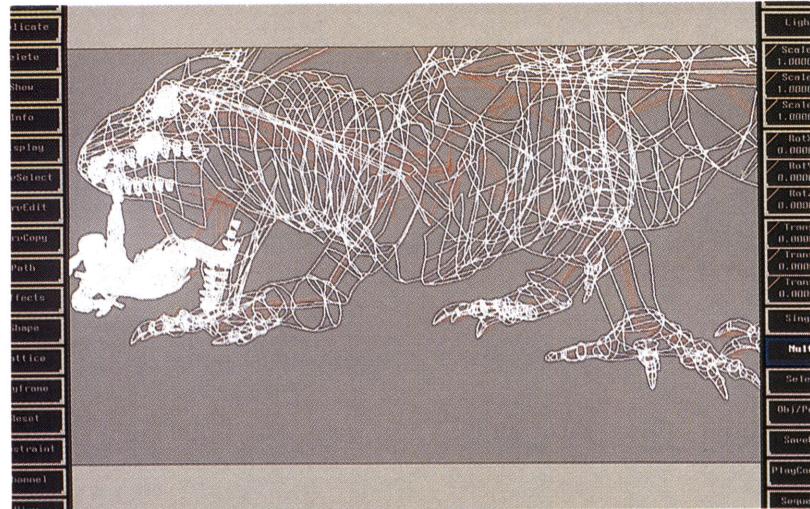
the tale, Bowen (Dennis Quaid), a self-dubbed dragon slayer, befriends the last remaining dragon, Draco (whose voice is provided by Sean Connery). Heading up the effort to create a realistic dragon was animation supervisor and technical director Dennis Turner, whose responsibilities involved assembling the end product by overseeing compositing, lighting and shading of 3-D elements, as well as the final rendering of sequences. Turner used the Softimage engine to animate Draco's movements. "There is a sequence in which Bowen and Draco decide to intimidate the peasants with a 'slay the dragon' extortion scheme," explains Turner. "Draco flies in and scorches a great swath across the ground with a fireball, causing huge explosions. The scene then cuts to reaction shots of all of the people fleeing; Draco banks around and bursts through a wall of burning grass and smoke, right up close past the camera.

Softimage was the primary animation tool used to create the body of Draco."

To add skin texture to the dragon's animated skeleton, Turner employed proprietary software developed by ILM. Draco's facial animation was handled by Rob Coleman, who used Cari (Caricature Animation), a program originally designed to create the facial expressions of the title character in the film *Casper*. The program was advanced substantially by Cary Phillips for ILM's work on Draco. The next step for the sequence was to create the wall of burning grass and smoke. Turner employed the shading abilities of Pixar's RenderMan to create the barricade. All of the elements were then combined with plates shot by director Rob Cohen and cinematographer David Eggby, ACS during principal photography.

Using kinematics, which is the study of pure motion, Softimage's animation system

In *Spawn*, a superhero from Hell is perforated by gunfire that leaves glowing energy holes in his body. The unusual wounds were tracked to the actor's movements with ElectricImage software. Banned from the Ranch president and creative director Van Ling notes, "We used ElectricImage extensively for tracking in certain shots. This was something you normally do in an SGI program, but we were able to do it in ElectricImage [on the Mac platform] successfully."



Above and bottom right: Dragonheart's *Draco* was constructed at ILM via Softimage, which facilitates the use of kinematics. **Top right:** ElectricImage was used to create the nuclear blast effect in *Terminator 2: Judgment Day* — the first motion picture effect ever done completely with a desktop 3-D package.

bases the movement of characters on these laws. Explaining the basis of the Softimage animation system, Coleman offers, "As in the old song, 'your backbone is connected to your hip bone, and your hip bone is connected to your leg bone;' we build up the hierarchy of a character in Softimage. We put the bones inside a character, which Softimage calls 'chains.' It's really that simple. Where's the hip bone? Where's the leg bone? Where's the rotation for the knee? If you look at your own arm, you have two main bones that are joined at the elbow. This would form a 'chain' in Softimage, and with those running through the body we're able to actually animate the arms moving, the body bending or the legs walking. The chains can be animated two ways: by using either rotations [forward kinematics] or constraints [inverse kinematics]. The difference is, if you take your arm and simply lift it up, you're doing forward kinematics. You're bending from your shoulder to your elbow, and your whole arm goes up. If you grab your right wrist with your left hand and you pull your right arm up, that's inverse kinematics. Your elbow naturally moves without any instruction to that joint. Your arm is only a certain length, and Softimage uses inverse kinematics to determine where the elbow goes if the wrist is in a certain location. It's a complicated process, but once you understand it, it's fundamental to anatomy."



Once a character has been modeled, animated, and skinned, the finishing touch is to render the sequence. Using tools like ray tracing and radiosity, rendering determines the opacity or translucency of an object and integrates the cinematographer's lighting into that variable to accurately represent the particular object. Rendering software uses mathematical calculations based on the geometry of an object, mainly composed of polygons, to determine how the environment's lighting will interact with it. The resolution of the object will be determined by the number and size of the polygons within the geometry. Multi-polygonal images drastically increase the rendering time as mathematical calculations increase exponentially for each polygon surface.

One solution to this is in the use of NURBS (non-uniform rational B-spline components), which are organic-style objects that can be deformed to any shape without the constraints of straight-

line trajectories. Pixar's RenderMan program was originally developed by Ed Catmull while he was working with Lucasfilm's "Computer Division" on the film *Young Sherlock Holmes*. Catmull and his team from the New York Institute of Technology created the new software for a sequence in which a priest, involuntarily under the influence of a powerful narcotic, watches as a crusading knight leaps from a stained-glass window and attacks him. This sequence marked a key moment in the advancement of digital technology. "We wanted high resolution, great depth, image complexity, and motion-blur," explains Catmull. "Essentially, we had an ongoing competition; we were all trying to outdo each other at our weekly meetings, and one by one we solved the problems. The program we developed became RenderMan." Their creation would eventually earn the group an Academy Award for Technical Achievement in 1993.

In 1986, Catmull and his



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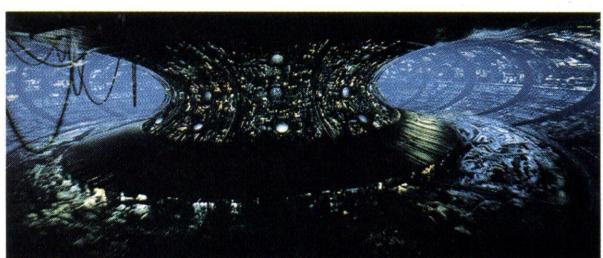
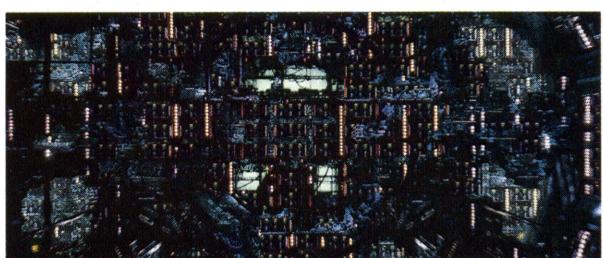
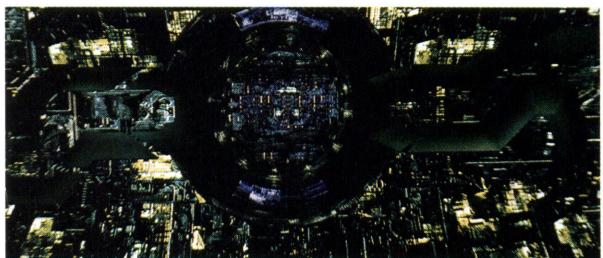
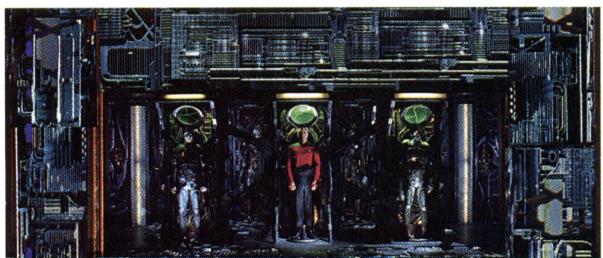
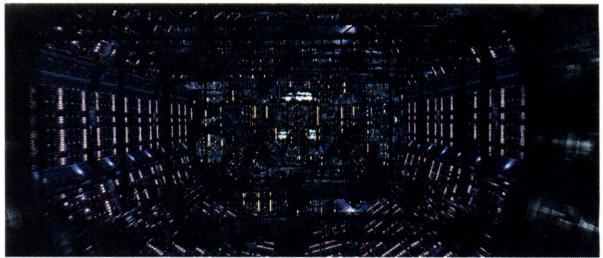
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For Star Trek: First Contact, Illusion Arts animator Fumi Mashimo and visual effects cinematographer Bill Taylor, ASC used ElectricImage to help achieve the film's ambitious opening gambit: a 35-second shot that begins from within the pupil of Captain Picard's eye and pulls back to reveal the mammoth expanse of the Borg ship and the surrounding galaxy.



group left Lucasfilm and formed their own company, Pixar. The culmination of their efforts was seen in the 1995 film *Toy Story*, the first entirely computer-generated feature films.

From the outset, RenderMan was engineered to create high-quality computer-generated images. The RenderMan images do not suffer from any of the typical computer-imaging problems, such as aliasing, strobing, or unrealistic visual simplicity. Instead, RenderMan images offer such visual attributes as complex textures, shadows and the influence of various types of lights from multiple sources.

If CG special effects are to be smoothly integrated into a motion picture, they must accurately seem to reflect the image-taking characteristics of real-world cameras and film stocks. RenderMan's motion-blur and depth-of-field functions can smoothly blur synthetic images so that they realistically approximate traditionally photographed images.

One of the curses of digital images is aliasing, or undesirable 'beating' effects caused by

sampling frequencies that are too low to faithfully reproduce image detail. There are two basic types of problem: temporal aliasing (evidenced, for example, when the spokes of a wheel apparently reverse direction) and raster scan aliasing (twinkling effects on sharp boundaries, such as horizontal lines). Using patented techniques for anti-aliasing (the smoothing and removing of aliasing effects via filtering), RenderMan eliminates these image blemishes.

One of RenderMan's most valuable facets is its programmable shading language, which allows technical directors to create any surface appearance they can imagine. One of Dennis Turner's tasks at ILM is to create shader codes for various projects. "A shader can put the light side and shadow side on objects," Turner explains, "but it is also responsible for everything that gives the basic geometry its color or texture; if you see CG elements that look like wood, flesh or metal, that's all coming from shading. Texture-mapping is an element of shading as well."

"I probably got into my heaviest shader writing on *Star*

Trek: First Contact," he says. "At the climax of the movie, when Data [Brent Spiner] breaks open the gas column in the engine room, a great deal of gas comes spilling out and creeping across the floor. That sequence involved a combination of techniques co-developed by both Ken Westly, who is another technical director here, and myself. Ken was primarily responsible for doing particle systems, so all of the gas gushing out of the pipes was particle work. For shots of the gas pooling on the floor, and of Captain Picard [Patrick Stewart] and the Borg Queen [Alice Krige] hanging above the pools of gas, we used RenderMan shaders to create the gas. I couldn't afford to just have a 'flat-surface' look; it needed to look like volumes of wispy, swirling, boiling gas, and all of that was done with fancy-schmantzy RenderMan."

To facilitate a smoother integration of RenderMan into the production process, Pixar has developed several powerful applications known as Artist Tools. One of these, dubbed Alfred, is a particular noteworthy processing system specifically designed to manage

Images courtesy of Illusion Arts.

on film

Stephen Lighthill

"I've shot miles of film for *60 Minutes* and documentaries. Maybe that's why I believe every story begins with faces. I'm also a minimalist. I try not to alter naturally lit environments. The drama flows naturally from that. I'm neither above nor below the line. I'm on the line – a bridge between the director's vision, and the crew and cast. That's important because the mood on the set is reflected in the images on the screen."

Stephen Lighthill's credits include *Nash Bridges*, *Earth 2, Vietnam War Stories*, many MOWs, *Shimmer* and other features, and such award-winning documentaries as *Berkeley in the Sixties*, *Coming Out Under Fire* and *Gimmie Shelter*.

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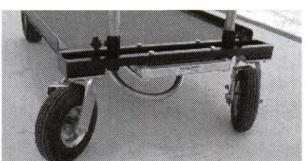
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network-distributed rendering. Distributive rendering is quickly becoming a household word with animators. As image complexity increases, so does the amount of rendering time. Depending on the complexity of a shot, rendering can take from three hours to three days or more. With distributive rendering, however, the software "farms out" pieces of the shot to many different computers within a network, expanding processing speed well beyond the 1,000-megahertz range and thereby drastically speeding up the rendering process.



UNIX computer platforms are not the only game in town, however; with the advent of its PowerMac processors, Macintosh has maintained its hold on a significant share of the rendering market. One high-end animation and rendering tool for the Mac platform is the ElectricImage Animation System.

Beginning at what would seem to be the dawn of the digital era, Electric Image Incorporated was formed in 1987 by the trio of Jay Roth, Mark Granger, and Markus Houy. ElectricImage Software made its feature film debut when it was used to create the nuclear blast effect in *Terminator 2: Judgment Day* — the first motion picture effect ever done completely with a desktop 3-D graphics package.

In addition to being a character animator, compositor, and morphing tool — among other features — this software's strongest attribute seems to be its fast rendering time. Eric Ippen, an animator at Banned from the Ranch whose recent work is peppered throughout *Spawn*, comments about the software, "The thing that I like about ElectricImage is that it renders very quickly and deals with luminance and alpha channels very well with respect to RGB."

In the realm of digital technology, one mathematical bit can define two levels, or states (on/off, black/white), two bits can define four levels, three bits eight, and so on. In image terms, eight bits can define 256 levels of gray

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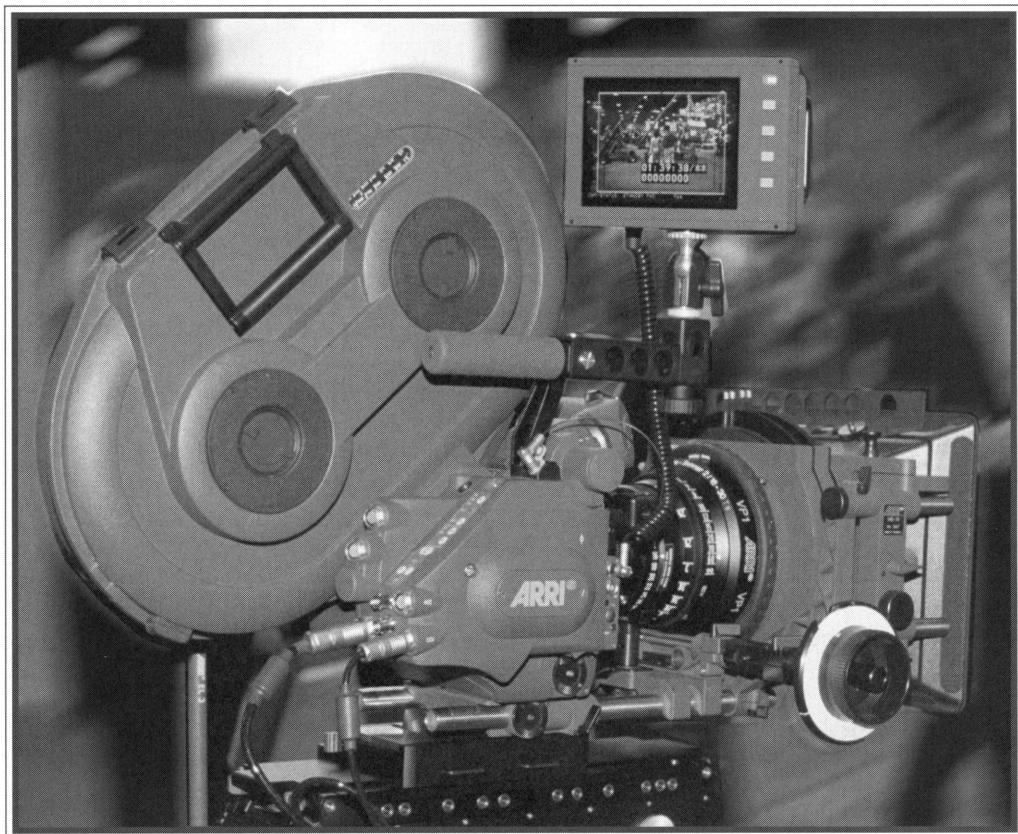
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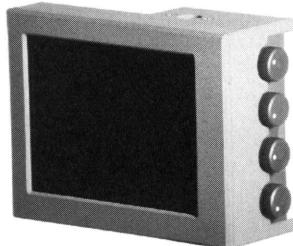
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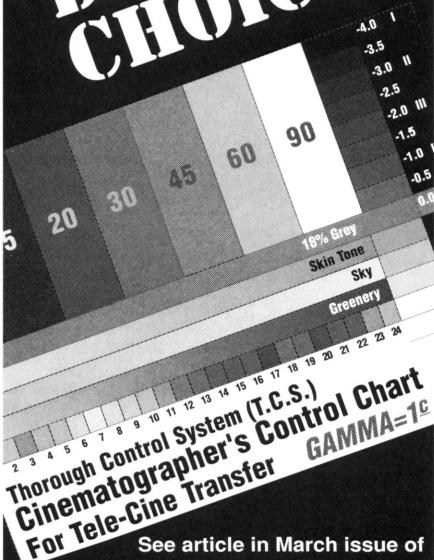


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between black and white. With 32-bit technology, eight bits are devoted to each primary color channel (red, green and blue), while the remaining eight bits define the alpha channel. Van Ling, president and creative director of Banned from the Ranch, expands on this concept: "The alpha channel is basically a matte — a key which is automatically generated in computer images. So when you composite [an object] into an image, the program uses the alpha channel to matte out your object against the background."

Some of ElectricImage's other features include motion-blur and depth-of-field renderers. "A lot of packages just don't do motion-blur that well, or take a long time to calculate it," Ippen adds. "With ElectricImage, you can turn on the motion-blur for an object and then have control over a shutter angle, anything up to 360 degrees. It's even possible to create a shutter at an angle greater than 360 if you're looking for a very bizarre effect."

To further illustrate the software's capabilities, Van Ling describes an intensive sequence for *Spawn*: "We used ElectricImage extensively for tracking in certain shots. This was something you normally do in an SGI program, but we were able to do it in ElectricImage [on the Mac platform] successfully. There's a Steadicam shot in which the camera is moving forward and bouncing up and down while *Spawn* runs through the doors [of a restaurant], knocks over a waiter, falls down and then lands with his back against a wall. During the entire sequence, he had to have these glowing green wounds with energy coming out of them. Our artist, Steve Walker, tracked that whole move in ElectricImage. [The program] allows you to put your shot up in the background, frame by frame, and position your models in front of it to match. [Walker] took a *Spawn* torso, which is where all of the green energy wounds were, and tracked the torso to match its position in every frame. We essentially animated it that way. This technique is called a match-move, and if you were to

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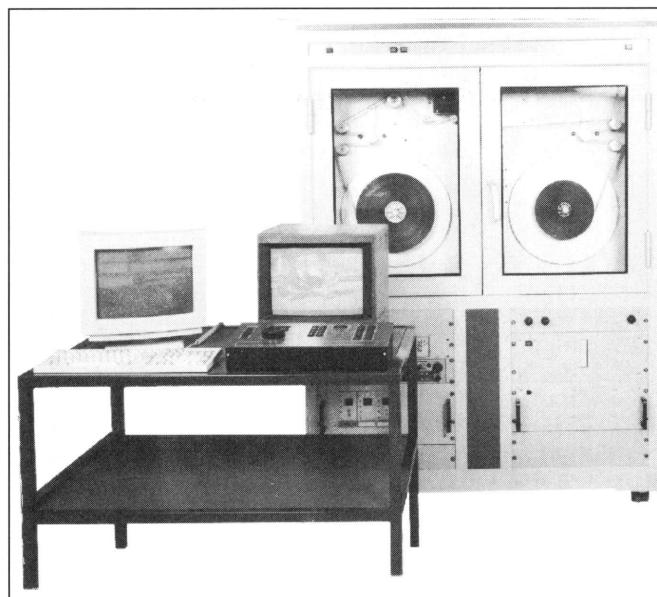
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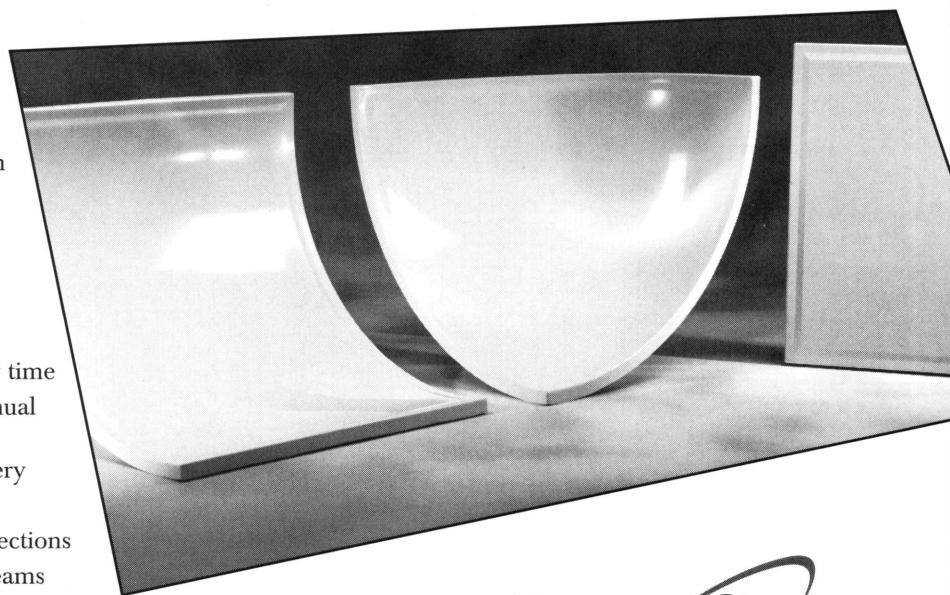
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watch the match-move by itself, you would see a background plate and this torso moving in sync with the [action] onscreen. Once we did that, we placed the wounds on the model and tracked them [using ElectricImage]. Then we rendered those wounds separately, without the torso, using the alpha channel and compositing the effect onto the figure from the plates."

For *Star Trek: First Contact*, Illusion Arts animator Fumi Mashimo and visual effects cinematographer Bill Taylor, ASC used ElectricImage to help achieve the film's ambitious opening gambit: a 35-second shot that begins from within the pupil of Captain Picard's eye and pulls back to reveal the mammoth expanse of the Borg ship and the surrounding galaxy. "That sequence involved two live-action pieces," Taylor says. "There was a motion-control shot that went from a 1:1 macro view of Picard's eye to a close-up that extended to about the middle of his chest. We then switched to a 35mm lens and placed the camera on a long dolly on an 85' track, located

within the set representing the Borg ship's passageway. That shot pulled back until we had the whole set in frame with a man-powered dolly: six guys running as fast as they could."

Mashimo also used ElectricImage to composite the two live-action pieces into the different planes of 2-D paintings, created in Adobe Photoshop. "ElectricImage has a function called 'camera map,' which turns a 2-D painting into a 3-D image," Mashimo explains. "If you do the move in [ElectricImage], you can get the prospective change in a scene, and all you have to provide is the painting and the geometry for the right places. This shot involved about five or six different paintings, and each time one of the paintings got small enough, another painting took over."

Another ElectricImage advocate is Lithium Films' William Robbins, who creates graphics for the electronic monitors that appear onscreen in many high-tech feature films. Robbins' résumé includes work for such films as *Air Force*

One, *Batman and Robin* and the upcoming *Armageddon*. He uses a collection of software on SGI and Mac platforms to create the screen images, but says that ElectricImage is one of his main tools. "For *Air Force One*, we did the whole interior of the 747 cockpit, including the forward-looking radar, as well as screens with information about the plane's engines, thrust ratios, take-off and landing gear, offensive measures, defensive measures and countermeasures," he says.

Robbins and his co-worker, Kent Demaine, are proponents of previsualization tools, and they also use ElectricImage to create 3-D, photo-realistic digital representations of locations and sets. "The 'old school' way of doing things is to have a conceptual artist do a lot of the previsualization," Demaine explains. "But that approach can be limiting, because you're not able to work out camera angles, choose the type of shot you want, and so on. If you develop a 3-D space, you can pretty much fly through it; you can change your lenses and angles, and really begin

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setting up the look of your shots. When you get into photo-realistic previsualization, ElectricImage is a wonderful tool."

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As the aforementioned testimonies indicate, the incorporation of visual effects into photography is becoming standard practice, and a common element of the cinematographer's trade. Learning how these elements mesh — and how to communicate effectively with digital artists — is an imperative step for directors of photography seeking high-quality results. Maintains Allen Daviau, ASC, "As a cinematographer, you want to coordinate the design of the effect with your lighting plan and your color plan, and the best way to do this is to communicate with everyone involved from the very beginning. I've never run into a digital effects artist who was not thrilled to have the director, the cinematographer, and the production designer offer up-front input about what they are trying to achieve in a scene. Digital is a wonderful tool, but you do have to have the concept of the scene in your mind, whether it's sketched out on paper or within a computer-generated program."

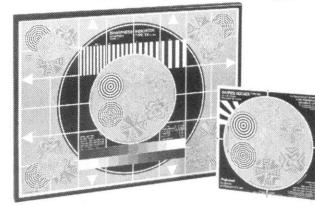
Dennis Turner adds, "Generally speaking, the cinematographer's work has been completed by the time we get the plates. It would be useful to have the cinematographer a little more involved, because then you could ask him questions like, 'What lights were you using here? Did you have a 1K over there? What was the gel on this light?' You can get a hint of the light placement by looking at the picture, but you can't be certain about it — you're simply inferring the placement from what's in the plate."

However, Turner also feels that the ongoing improvements in digital effects tools are affording cinematographers great freedoms from the constraints of the past. "There used to be many more limitations," continues Turner. "As more and more of this kind of work has been done over the years, we've been granted more flexibility in terms of what kind of

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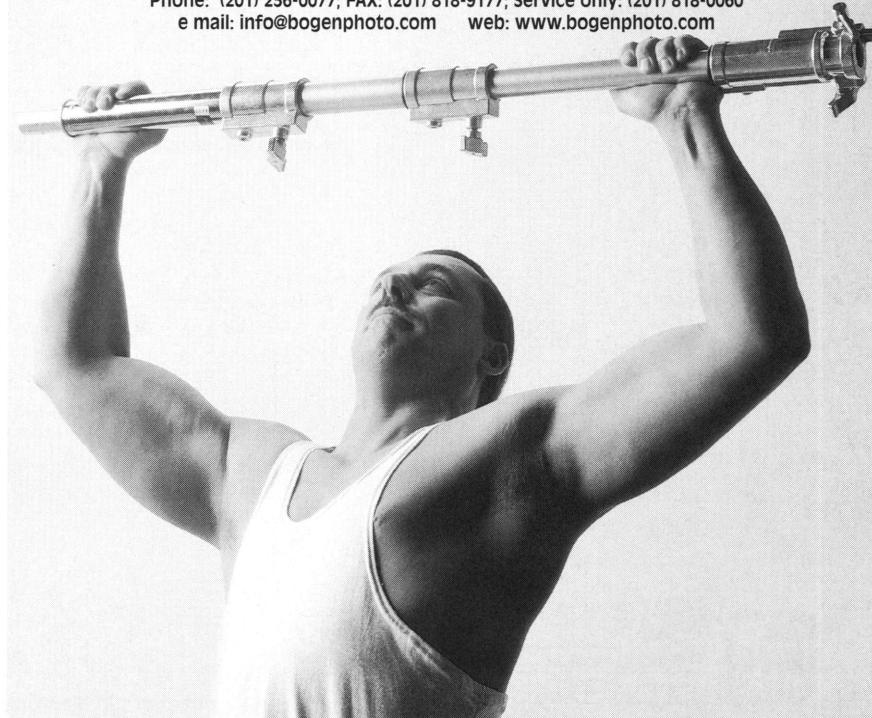
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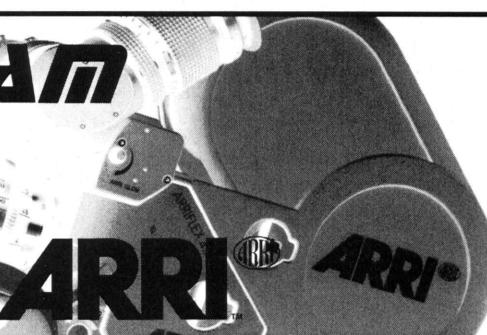


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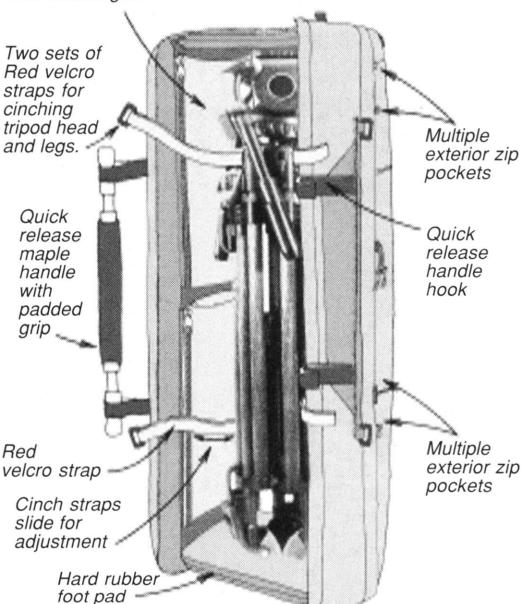


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plate is shot and what kind of plate we can get effects into. We're almost at the point where, given enough time and money, the options are unlimited."

While digital technology's advantages include the ability to create effects faster, time constraints can still be a problem during postproduction, when digital artists often find themselves sacrificing the quality of effects to meet release-date deadlines. Indeed, as software programs have become faster, postproduction schedules have been pared down, thus offsetting the potential benefits of the technology. "You'd be surprised how quickly they release movies these days," Turner says with a sigh. "They'll have the trailer out there long before we're finished doing the work; sometimes, you'll be at home one night watching TV, and suddenly this trailer will come on for the movie that you're in the middle of working on. The announcer says, 'Coming soon to a theater near you,' and you just shake your head and say, 'We're not done yet! Don't tell people about it, we're not finished!'"

Daviau elaborates on this syndrome, noting, "One of the questions you always have to confront on a picture is how much time [the effects artists] will have during the post schedule. Given the manner in which release dates are set these days, the more you're able to incorporate things into the original photography, the better off you are."

Assessing the future of digital effects, Daviau formulates an appealing picture: "I really look forward to digital imagery being used not just in big effects pictures, but to more frequently enlarge the scope of smaller films that would never have been considered 'special effects' films. This is particularly pertinent with regard to period films, where you could conceivably replace a whole section of contemporary reality with period detail that no longer exists, efficiently and economically, in order to enlarge the scope. The potential to provide a much richer vision is what really makes me enthusiastic about digital technology." ♦

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by Andy Sobkovich

Everyone reading this magazine has them: little bundles of colored plastic with strange names, otherwise known as lighting-gel swatch books. There is no right or wrong way to use a swatch book, but they do present a wide variety of creative options. Which are you going to use? And how?

Like many others, I tend to fully test every gel before I use one in a practical situation. That way, I know exactly which gel was tested, how it was tested, and how I can incorporate my results into practice. If the gel in question will be used on a camera lens, I put it on the lens and look through the eyepiece. If a gel will be used on a certain type of lamp, I shine the light through the gel and onto my hand, and also onto a white card. This quick test shows me exactly how each gel will look when I attach it to a particular fixture.

The respective swatch books supplied by the competing gel manufacturers (such as Rosco, Lee, and Great American Market) offer varying amounts of technical information on each gel. These details generally vary in their degree of usefulness, and are based solely on internal company tests. Only by

doing your own testing will you have results that are accurate for your personal exposure and color meters, which may differ from the instruments used during the manufacturers' tests. Here are some criteria I consider to be important when considering a gel for use:

- What does this gel do on a 3200°K tungsten lamp or 5600°K daylight-balanced fixture?
- What color does this gel correct to 3200°K or 5600°K?
- What is the real loss from your light source in terms of T-stops when using this gel?
- What is the precise MIRED (or color temperature) shift created by the gel?

Gels mainly effect color. The CTB (color temperature blue) and CTO (color temperature orange) series are the basic building blocks of this process. But how do you use them, and to what effect?

While using CTO and CTB, cinematographers generally think of color-balancing in terms of quarter steps: $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and full CTO or CTB. A simple example of this process can be made with a hypothetical living-room set with some windows in the background and a performer in the foreground. All of your lamps are 3200°K, and consist of a key and fill light on the performer, a backlight on the performer, and a background light. But what if you want the light coming through the windows to be "daylight," and the light on the performer's face to be "warm interior"? What color temperature should each lamp be? In strict photographic terms, the answer is 5600°K in the background and 3200°K in the foreground, but this is a very large jump in color that's not always appropriate. Also, what color is the backlight on your performer, which appears to be coming from the direction of the background windows? Compressing

the color range of the four lights into smaller color differences would be a much more natural solution to this lighting situation.

If you're shooting with tungsten-balanced stocks, one solution (as illustrated in Example A) is to use the color of the unfiltered 3200°K key light on your performer's face as a starting point, or "white reference." You can then add $\frac{1}{4}$ CTO to the fill light, $\frac{1}{4}$ CTB to the performer's backlight, and $\frac{1}{2}$ CTB to the background light. This creates a color transition from one source to another in smaller steps which may be less visually jarring and more appropriate to the scene.

Another approach to such a lighting situation is to adjust the white reference. This will allow you to use a variety of colors as your starting point. There is no reason to exclusively use 3200°K or 5600°K as your white reference. In Example B (see diagram), we have a lot of natural daylight (perhaps from a window or skylight) on the background that we wish to use. However, we still only have 3200°K lights to supplement it, and must achieve the same color difference in another way.

The background light should be gelled with $\frac{1}{2}$ CTB (from its 5600°K starting point), while the backlight is $\frac{1}{4}$ warmer (more orange) than that, requiring $\frac{3}{4}$ CTB. The key is $\frac{1}{2}$ warmer than the background, so it should have $\frac{1}{2}$ CTB. Finally, the fill is to be $\frac{3}{4}$ warmer than the background, which means that a $\frac{1}{4}$ CTB is appropriate.

Both of the aforementioned solutions will provide you with a suitable color temperature transition, but what about the color of your key light, if it is to be "white"? You could put the appropriate color-correction filter on the camera (in Example B, with tungsten-balanced film, an 85 filter should be used), but there are other ways to achieve the same look. If you're shooting on film, the lab timer or telecine operator can adjust the color for you very accurately. But how do you control that process and make your intentions clear to the timer or colorist? My advice is to take the following steps. Before the scene, shoot your color reference card illuminated by

the key light. Make sure that you are lighting the card with *only* the light that you want to appear white. (You can also use a special light if there is not a convenient light of the desired color on the set.) The timer or colorist can then balance the colors to that reference to create your desired skin tone and the light transition. (Vilmos Zsigmond, ASC frequently uses this approach, and details his techniques in AC Nov. 1995 and Nov. '96.)

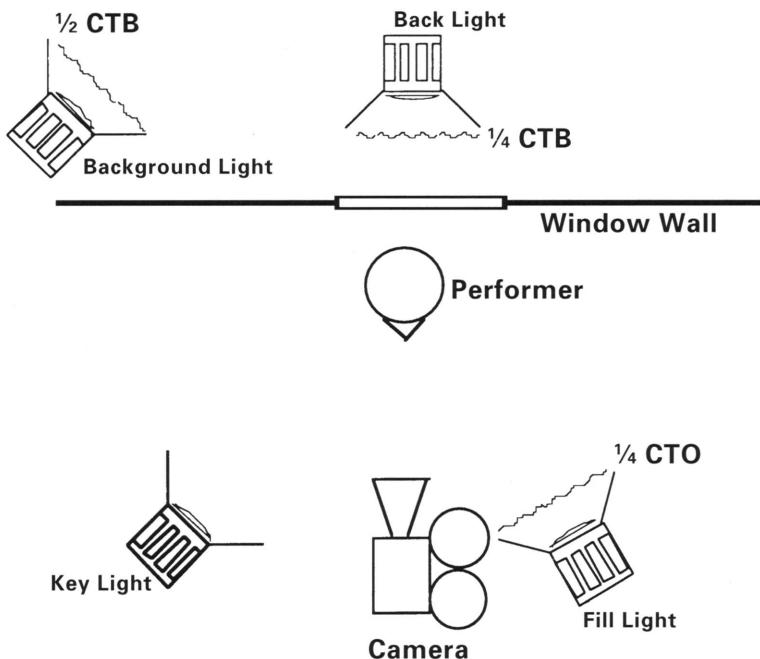
If you're shooting video, you can hold your white reference card in the key light (or special fixture, again making sure to illuminate the card with only the light that you want to appear white), and then do a white balance. (See AC Mar. 1996 for further discussion of reference charts for telecine.)

It is also possible to modify the colors the camera is seeing by using gels on the lens to affect your white reference. How do we do this with the samples supplied in a gel swatch book? By using them as a source for this subtractive filtration.

For video situations, hold your white card in your light source and hold the gel from the swatch book in front of your lens. The gel should be the opposite of your desired color. For example, if you wish to color everything $\frac{1}{4}$ CTO, you should white balance through a $\frac{1}{4}$ CTB gel. The gel should be large enough to cover most of the lens, although some "light leak" around the edges doesn't seem to effect the result. If you are shooting film, you can try to cover the lens with a gel and shoot your reference card, remembering to compensate for the light loss of the gel. The lab can then adjust your timing to make this reference "white," thus making the following footage warmer or cooler as a result. If the front of your lens is much larger than the gel you have available, as is often the case, you will need to light your reference card with a lamp that is small enough to be covered by the gel in your swatch book (such as a Fresnel with a 1" to 3" lens), or have a set of gels expressly for this purpose.

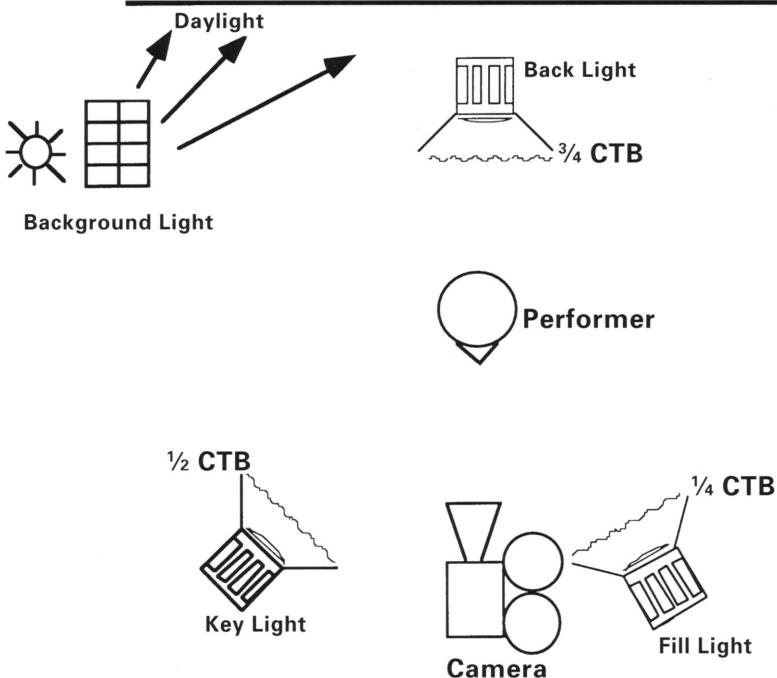
Example A

Painted Backing



Example B

Background Wall



How do you know what a gel does to the color temperature of a light? To fully answer this question, you need real data on how each gel performs under specific circumstances, especially in regard to the different qualities ascribed to each by the various gel manufacturers. Although these companies use the same terms (CTB, CTO, etc.), their products don't always deliver consistent or even similar effects in terms of color correction or color purity. For example, consider a comparison between GamColor 1523 Full Blue CTB, Lee 201 Full C.T. Blue, and Rosco 3202 Full Blue; each of these gels is supposed to do the same thing, but they are very different colors and give different results. You will need to perform tests to discover which gel gives you the results you desire and expect.

Of course, your colors may also change if tungsten lights get dirty, or if lamp voltage is a bit low. Correct gel usage can fix these problems. Discharge lights (including HMIs) have a nominal color temperature which can vary greatly from what is advertised. You have no chance of accurately matching anything if you don't know where your starting point is, so the use of a three-color meter is recommended. This device will read color temperature as a red-blue shift and either + or - green. One way to use it is to hold the color meter in the light and take a reading. If you want to correct the light, hold a gel from the swatch book over the meter's light sensor and take another reading. Keep trying different gels until you get the readings you want. You should also ensure that the gels you are using on lights are giving you the same readings as the ones in your swatch book, even if they are from the same manufacturer. If they are from a different batch of gels, the color may not be exactly the same. You should also be aware that there is a range of color-temperature differences too small to see. A rule of thumb is approximately 150°K at a 3200°K reference point, and 400°K at a 5600°K reference point, but you will need to check this for yourself.

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the acceptable range of color temperatures there was a difference in the amount based on the starting color temperature of your sources? The MIRED System is one method of describing what a gel does to the color temperature of a light.

MIRED is an acronym for Micro Reciprocal Degrees. A MIRED measurement equals 1,000,000 divided by a source's color temperature in degrees Kelvin. For example, $1,000,000 / 3200^{\circ}\text{K} = 312.5$ MIRED. The amount that a gel changes a given color temperature is called its MIRED shift. A $\frac{1}{4}$ CTB gel should have a MIRED shift of -34.5, so the color temperature of a 3200°K light plus a $\frac{1}{4}$ CTB gel is $1,000,000 / (312.5 + (-34.5)) = 3597^{\circ}\text{K}$, creating a change of $+400^{\circ}\text{K}$.

In a swatch book, the listing for MIRED shift on a gel is crucial; a change in degrees Kelvin from some starting point as arbitrary as a manufacturer's listing is almost useless.

A three-color meter will also help you find out if any of your gels have burned, are fading or (worse still) are becoming green. If you are shooting for a few days on a set, it is vital to check all gelled lamps with a three-color meter at least four times per day to detect any changes in color temperature, or the sudden appearance of green light. The greening effect is a problem with some gels when they get hot enough to fade some of the pigment.

I'm very picky about the gels that I specify for a shoot. Typically, they are not all from one manufacturer. I expect that a $\frac{1}{2}$ blue gel on a 3200°K light should be 4100°K . Unfortunately, many are not even close. I need gels that give me accurate color correction, so I only use those that I have personally tested. However, I still test and check them all the time in the ongoing search for better products, and to ensure that the new batches of gels match the old ones. ♦

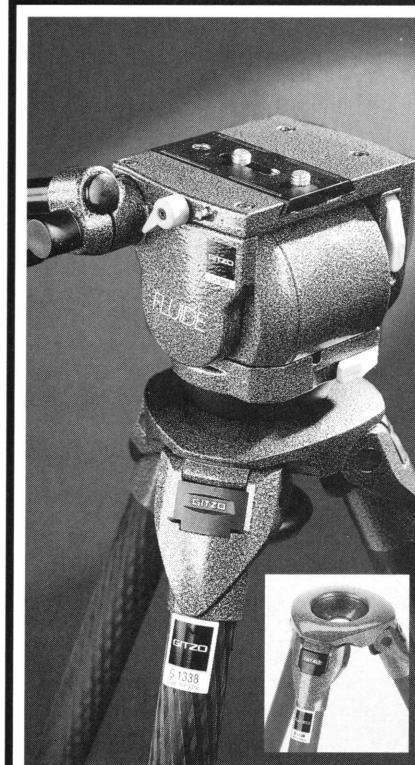
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Once Upon a Time There Was *Beauty and the Beast*

Director Jean Cocteau and cinematographer Henri Alekan fashion an enduring celluloid fable based upon the classic French fairy tale.

by George Turner

Director Jean Cocteau prefaced his finest movie, *La Belle et le Bête* (*Beauty and the Beast*), with these words:

Children believe what we tell them. They have complete faith in us. They believe that a rose plucked from a garden can bring drama to a family. They believe that the hands of a human beast will smoke when he kills a victim, and that this beast will be shamed when confronted by a young girl. They believe in a thousand other simple things. I ask of you a little of this childlike simplicity, and to bring us luck let me speak four truly magic words, childhood's

Open Sesame: "Once upon a time..."

Obviously, this message is not addressed to children, but to adults who are asked to view the movie with the ingenuous eyes of a child. This is an important distinction: unlike Disney's 1991 animated feature, which sets out to entertain the entire family, Cocteau's 1946 version of *Beauty and the Beast* is what the trade magazines call an "art house" film. The ideas imposed upon the simple story are too complex, some of the sequences are too scary, the modernistic score is too strange, and the general approach is too deter-



The lighting and compositions in *Beauty's* home suggest Vermeer paintings. Pictured in this scene are Adelaide (Mila Parely), Beauty (Josette Day), Father (Marcel Andre) and Felice (Nane Germon).

minately surreal to appeal to most youngsters. On the other hand, the film is a feast for anyone who can enjoy images and sounds as art. Cocteau referred to the picture as "a substitute for a poem," adding that it "is addressed to aficionados."

The movie hews closely to the tale's original text, which was written in 1757 by Madame Le Prince de Beaumont, but the screen version is heavily embellished with Cocteau's own ideas. A merchant, impoverished by the loss of his ships, has three beautiful daughters: Adelaide and Felice are vain and ill-tempered, while Beauty is kind-hearted. While returning on horseback from a business trip, the merchant gets lost in a forest during a storm. He finds a decaying castle where he is fed and sheltered by a seemingly invisible host. In the morning, he plucks a rose for Beauty.

Soon, a hideous Beast dressed as a nobleman appears and tells him he must die for stealing the rose. The man is allowed to visit his children, but must either return to pay for his crime or send one of his daughters. Beauty takes her father's place and goes to the Beast's castle, where she agrees to stay. Hopelessly in love, the Beast is kind to her and eventually wins her friendship. When she asks to visit her family, the Beast agrees on condition that she will return in a week. He gives her a magic glove which will take her wherever she commands.

During her absence, the Beast begins slowly dying of grief. When his magic horse, Magnifique, sets off to retrieve Beauty, Avenant, Beauty's no-good suitor, and Ludovic, her indigent brother, mount the horse and go to the castle. Beauty follows; when she finds the dying Beast, she declares her love for him. Meanwhile, Avenant and Ludovic try to steal the Beast's treasure from Diana's Pavilion in the castle garden. The statue of Diana kills Avenant with an arrow, and he is changed into the likeness of the Beast. The Beast himself simultaneously becomes a prince with Avenant's handsome features, and carries Beauty far away to their legendary home.

Cocteau (1889-1963) was a conspicuously eccentric figure in the artistic circles of post-World War I Paris. A highly successful novelist, poet, playwright and painter, the thin, sharp-featured genius exerted a strong influence over a group of intellectuals, artists, authors and composers. Among the latter were Maurice Ravel, Francois Poulenc, Igor Stravinsky and a group of non-conformist composers who called themselves The Six — Erik Satie, Arthur Honegger, Georges Auric, Darius Milhaud, Germaine Tailleferre and Louis Duret. He collaborated with Satie and Pablo Picasso on the ballet *Parade*, and wrote libretti for Milhaud's *Le Bouef sur le Toit*, Honegger's *Antigone* and Stravinsky's *Oedipus Rex*.

In 1930, Cocteau decided to make an experimental film, which he called *Le Sang d'un Poete* (*The Blood of a Poet*). The short was photographed by Georges Perinal and featured music by Auric, the youngest member of The Six. This most famous of so-called Surrealist movies was Cocteau's only venture into filmmaking until 1945-46, when he brought together a group of upper-crust denizens of the Parisian



demi-monde to create *La Belle et le Bête*. He did so at the urging of his actor friend and longtime companion, Jean Marais. Cocteau saw in the project an opportunity to incorporate his poetry, his dramatic flair and his penchant for experimentation. He chose a familiar French fairy tale because he believed that anyone robbed of a happy childhood would become a Beast. After the terrible years of World War II, he wanted to give the French people a motion picture that would allow them to escape the horrors of the times.

Assembling his creative team for *La Belle*, Cocteau was unable to secure the services of cinematographer Perinal, who was then under contract to famed producer-director Alexander Korda. However, he quickly recruited composer Auric, who, since his film debut with *The Blood of a Poet*, had scored several important films in France and England, including *Dead of Night* and *Caesar and Cleopatra*.

To "illustrate" the film — essentially the role of a production designer — Cocteau hired Christian Berard, who had never worked in films but was the most fashionable theater artist of the day. His career had begun in 1930 with Cocteau's play *La Voix Humaine*. Berard designed most of the sets and costumes for *La Belle et le Bête*, as well as the remarkable makeup for the Beast. He collaborated with Pierre Moulaert and Carre on the settings; with the famed couturiers, Escoffier and Castillo, on costumes; and with M. Alekelian on the film's makeup. The costumes were as flamboyant as the mobility of the actors would permit.

Rene Clement, a former combat cameraman, took time out from his own first feature as a director, *La Bataille du Rail* (*Battle of the Railroad*), to join the group as technical advisor to Cocteau. After completing *La Belle*, Clement finished *La Bataille* and was destined to become one of France's leading directors as the maker of *The Damned*, *Forbidden Games*, *Purple Noon* and *Is Paris Burning?*

Cocteau also hired the cinematographer of *La Bataille*, Henri Alekan. A World War II combat cameraman and Resistance leader who received the Le-

Beauty finds the Beast (Jean Marais) dying in the garden. Only her love can save him.

Beauty enters a corridor illuminated by candelabras held by living hands growing from the walls.



gion of Honor, Alekan had been an assistant to Perinal and Eugene Schuftan. *La Belle* would become the cornerstone of Alekan's reputation as one of the outstanding French cinematographers. The cameraman's later credits would include *Anna Karenina*, *Roman Holiday* (his only American film, for which he shared an Academy Award nomination with Franz Planer), *Austerlitz*, and the multiple-award-winning *Wings of Desire*. His achievements also earned him the 1995 ASC International Award (see AC Mar. 1996 for a complete retrospective).

From the beginning, Cocteau planned *La Belle* as a starring vehicle for Jean Marais, who had made a strong impression as Don Jose in the French film *Carmen*. For the role of Beauty, he selected Josette Day, a statuesque blonde who had just made her mark internationally as the unfortunate maiden in a popular Gallic comedy, *The Well-Digger's Daughter*.

In Paris, which was recovering slowly from the German occupation, studio conditions were quite terrible and equipment was scarce. Electrical power was undependable, to say the least. Cocteau decided to shoot as much of *La Belle* as possible in practical locations.

The first location was the manor-house of Rochecorbon in Touron, where the scenes set at Beauty's home were shot. This site represented the sun-drenched real world of 18th-century France, and

therefore was given a different photographic treatment than the mysterious exteriors of the Beast's magical domain. "What a pity France cannot afford the luxury of films in color," Cocteau mused. (Some 26 years later, a similar strategy was employed with color by Francis Ford Coppola and Gordon Willis, ASC in *The Godfather*, which effectively contrasted the bright and active outside world with the gloomy and sluggish inner world of the Mafia.)

As production began, Cocteau found himself fretting over Perinal's absence, but upon seeing the first rushes he quickly came to appreciate Alekan's expertise. The scenes in question were exquisite fixed compositions depicting the characters among clotheslines filled with bedsheets, upon which the interplay of sunlight and shadow, as well as the motions caused by light winds, could be seen. "Very, very beautiful," he wrote. "Clear, rich in detail, robustly poetic. Alekan has understood my style. Relief, contour, contrast — and something imponderable, like a light breeze moving throughout."

Most of the exteriors of the Beast's domain were filmed in the spacious and heavily foliated environs of the Louis XVIII Chateau de Raray, near Senlis. Cocteau insisted upon filming under whatever weather conditions happened to prevail in an attempt to "evoke the beauty which comes by accident." The company worked in rain, mists, fog and patches of

bright sunlight with treetops furnishing cecaloris-like patterns. Because no studio lights were available, torches and magnesium flares were utilized when more illumination was needed. By the time the work at Raray was finished, Cocteau was suffering from intestinal flu. Soon, Marais and several other members of the company also fell ill.

Marais also suffered from the application and removal of his makeup as the Beast, a procedure which required several hours each day to accomplish. The guise was very extravagant and unlike that in any other film. (A later American remake of *La Belle* reprised the familiar werewolf makeup designed for *The Wolf Man*.) The Beast's features resemble those of a lion with a sweeping mane; the hair cost alone 200,000 francs. The body form is that of a man, but inside Beast's ornate gloves are the hairy, clawed paws of an animal; in one scene, the creature's ears prick up when he hears a stag in the forest. Despite the heaviness of the makeup, Marais was able to express emotions clearly with his eyes, eloquent body language and tormented voice. The actor actually brings greater warmth to his turn as the Beast than to his other roles as the loutish Avenant and the overly prettified Prince.

By tying together shots made in various places at Raray, a completely fictional setting is achieved in the film. For example, the top of a wall becomes a ramp which seemingly leads to a balustrade that runs along a moat in front of the chateau. A magnificent promenade lined with oversized stone statuary of wild animals, photographed from a low angle, provided a weird setting for one dramatic confrontation scene.

Upon finishing at Raray, the company went to the Saint Maurice Studios in Paris, where most of the interior settings were constructed. Some additional scenes would be filmed later in studios at Joinville and Epinay. The first batch of Raray footage, screened the morning after it was photographed, exceeded all expectations. The remainder of the Raray scenes arrived from the lab the next day, and it was discovered that the negatives had been badly scratched at the lab. Overcoming his despair, Cocteau found that the more essential material could be salvaged with clever editing.

Cocteau and Alekan were at odds over the handling of the Raray scenes. The director felt that hard-edged, realistic photography would lend conviction to fantastic scenes. Alekan's artistry and professionalism demanded more subtlety. "Alekan is timid," Cocteau noted. "He hesitates. He does not dare to work for harsh effects in his photography. The result is a certain softness that I have to correct. Everything is still too pretty. I want it rougher, with more contrasts. I shall badger him until he comes around... After the projection I scold him. His mania for 'camera effects' and diffusion offends me. Nothing is better than a sublimation of the documentary style." Both cinematographic approaches are displayed to advantage in the final film.

The interiors of Beauty and her family at home are exceptionally well-lit, grouped and photographed. They strongly suggest genre paintings by



Above: *Beauty is treated well by the Beast.*
Left: *The star-crossed lovers among the stone beasts of the garden.*

Dutch and Flemish masters, particularly those of Vermeer.

The studio settings of the Beast's home reflect brilliant imagination. The compositions and lighting derive inspiration from the art of Gustave Dore, the French artist whose woodcut illustrations for *The Bible*, *The Divine Comedy*, *Paradise Lost* and many other classic tomes depict a dark and terrifying world conjured up by an unrestrained intellect. During the production of *La Belle*, Cocteau acquired a Dore bronze of Perseus, Andromeda and the dragon. "Under its sign I made my film," Cocteau said. "It sums up the picture and explains it...The influence of an object on our subconscious is greater than we think." The sculpture itself appears in the film in Beauty's room within the Beast's castle. The Dore-like forest around his lair, which includes a ravine in which Beauty's father becomes lost, was created within a soundstage to permit fog and lightning effects.

The castle's interior is equally impressive and fantastic. The front door opens into a long, dark hall which is lined on both sides by candelabras held by living arms protruding from the walls. At the approach of the visitor, each arm lifts its chandelier and the candles light up. When Beauty takes one of the



Father enters
the Beast's
domain, amid
settings that
resemble the
woodcuts of
Gustave Dore.

candelabras away, the arm falls limp. A hand grasping a similar array in the center of the dinner table also reaches out to pour the wine. All of the fireplaces are ornamented with sculpted human faces which sometimes exhale smoke. The eyes open and watch passersby, and the heads turn to follow conversations. There is no animation involved in these stage effects; the faces are those of actors who were "built" into the set.

La Belle's studio photography was unusually difficult because of power failures and the limitations of the production's antiquated or damaged equipment. On one cold winter day, there were seven electrical breakdowns, bringing work to a halt. The film lab was unable to process the negatives for fear of further breakdowns. The set movers often worked by candlelight. Nerves were stretched to the breaking point.

Cocteau and Alekan continued to have differences. The lighting of the heads of the living statues was, Cocteau felt, "too lively; it humanized them." In his diary, he wrote, "I still feel I was right to wage war against 'camera effects' and soft textures. Yesterday's pictures were a thousand times more robust, and presented that sculptured outline in light that I admire so in Perinal. The women lose by it. Their roles gain. By degrees, Alekan is finding his equilibrium and getting into his camerawork what corresponds to the particular way I tell a story, gesticulate, write."

One day Alekan reported that some of the studio personnel were criticizing the photography as "cheesy" and badly lit. Cocteau wrote, "Strange he does not know what I have taken for granted for years — that whenever one attempts something new, people become blind, seeing only the parts that are like the things they already know. It has been decided that anything soft and fuzzy is poetic. Now since, in my opinion, poetry is precision itself, is mathematics, I drive Alekan toward the opposite of what appears poetic to fools..."

In addition to daring photography, the film offers numerous in-camera special effects — or as

Cocteau called them, "Tricks, but honest tricks, the only kind I can get excited about." Some are the kind used in the early years of moving pictures, in which the camera is halted in the midst of action, the players "freeze," an object in the scene is replaced by something else, and the scene continues. This basic technique was used to create scenes in which a falling pearl necklace changes into trash, Beauty's tears become diamonds, and so on. The most memorable sequence is Beauty's journey through the castle, in which she seems to be floating along slowly, her voluminous costume billowing like flames. The effect was achieved by photographing Josette Day at high speed as she ran through the settings. The resulting slow-motion gives the scene both a dreamlike quality and a magical look. One scene in a long hallway with blowing draperies is almost identical to a scene in the 1927 picture *The Cat and the Canary*, directed by Paul Leni and photographed by Gil Warrenton, ASC. Certain other parts of her journey have a much different look because Beauty seems to be floating along without moving her limbs — a small rolling platform was concealed by her floor-length skirts.

La Belle's more complicated effects shots were saved for the last day and night of work at St. Maurice Studios. In one scene, Beauty appears to walk through a wall into her father's house. Actually, she was photographed backing into a specially prepared place in the wall, and the sequence was reversed in printing so that the wall appears unblemished until she bursts through, the effect accented by the nearby drapes rippling backwards. Similarly, the scene of Beauty and the ex-Beast rising into the air was made by photographing them at high speed as they dropped to the floor, and then printing the action in reverse. The last scene, showing their flight through the clouds, was done with multiple exposures. The figures were photographed prone (and solidly anchored) while a wind machine rippled their clothing and the camera moved back. This effect benefits from the naïve freshness of the technique, but suffers from its limitations. The close-up showing the dying Avenant becoming a beast was done with one still photo crudely "morphing" into another in a strange, spreading dissolve inferior to many of Hollywood's similar efforts on behalf of werewolves and Dr. Jekyll. Although he avoided using optical printing effects on the picture, Cocteau went the opposite direction while making the film's trailer, in which multiple moving images are manipulated and arranged like postage stamps.

Auric had worked on *La Belle*'s musical score during production, but was not allowed to see assembled footage because Cocteau wanted him to avoid deliberate synchronization with the images. Cocteau had mentally created a rough score of his own during production, and refused to hear any of Auric's composition until the film was edited and sound in place. He even avoided the recording sessions, which were conducted by Roger Desormiere with a symphonic orchestra and chorus, because he wanted to "receive the shock of it without preparation."

And shocked he was. The music contradicted all of his preconceived ideas. In some scenes the mu-

sic complements the visuals in a fairly conventional manner, but in others it seems unrelated to what is happening on the screen. Long scenes in which there is no music or any other sound, such as the walk through the hall of handheld candelabras, are interrupted by startling bursts of orchestral sound. The score is rich and somewhat reminiscent of Ravel, and there is no attempt to make it unobtrusive. In all, the score is unlike any of Auric's other film music, with the exception of a deliberately imitative 1948 Franco-British picture, *Corridor of Mirrors*.

Cocteau quickly overcame his discomfort with the music, however, and praised his composer's efforts. "His music marries my picture, impregnates it, exalts it, completes it," he declared. All doubts were expelled by the enthusiastic reaction to a screening at Joinville before an audience of studio technicians, whom he called "people whose life work consists in preserving the 'blood of poets' in tin cans."

La Belle went on to win the Prix Louis Delluc, and became Cocteau's most popular film. He lived to write and direct a half-dozen more pictures of varying quality, most starring Marais, and wrote numerous screenplays for other directors. Marais became more popular than ever after Cocteau's death in 1963, most notably in the title role of a series of *Fantomas* thrillers.

Despite its widespread popularity, however, *La Belle* does have some puzzling aspects. Probably its strangest touch is the moment when the Beast, released from his curse, transforms into a ringer for

Beauty's would-be lover, who was a rotter.

"A film is never finished," Cocteau wrote while *La Belle* was being edited. "There's always something more to be done, and each thing becomes more difficult than ever because a troupe, though it flows apart like mercury, cannot take shape again as mercury does. It returns to find itself in a land of shadows. Each person comes out of another world. Our world [that of the film] is now a memory." ♦

Credits

A Discina International film; An Andre Paulve production; story, dialogue and direction by Jean Cocteau; from the fairy tale by Mme. Leprince de Beaumont; photographed by Henri Alekan; music by Georges Auric; orchestra under the direction of Roger Desormiere; illustrator, Christian Berard; technical advisor, Rene Clement; production manager, Emile Darbon; sets by (Rene) Moulaert and (Lucien) Carre; costumes by (Marcel) Escoffier and Castillo, executed by Paquin; cameramen, Henri Fouquet, Foucard and Latouzi; stills, Aldo; makeup, Alekelian; script girl, Lucille Costa; supervising editor, Claude Iberia; general manager, Roger Rogelys; filmed at St. Maurice Studios; GM Film Laboratories; sound, Jacques LeBreton and Jacques Carrere; assistants, H. Girbal and Paul Gaboreau; released in U.S. by Lopert Films; later released by Janus Films. English subtitles by Francis Howard, Irving Drutman. Running time (France) 100 minutes, (U.S.) 90 minutes.

Beast/Avenant/Prince, Jean Marais; *Belle*, Josette Day; *The Merchant*, Marcel André; *Adelaide*, Mila Parely; *Felice*, Nane Germon; *Ludovic*, Michel Auclair; and Raoul Marco, Gilles Watteau, Noel Blin, Christian Marquand.

Note: The quotations from Cocteau are from his memoir, *The Diary of a Film*.



Fall Quarter 1997 Courses

Cinematography

- ♦ **First Steps in Electronic Cinematography** with JESSE WEATHINGTON, director of photography whose 17 years of experience includes broadcast television, documentaries, commercials, industrial film and video, and features
- ♦ **Arriflex Certification for Camera Assistants** with BILL RUSSELL, Western Sales Manager, Arriflex Corporation
- ♦ **Cinematography I: An Introduction**, with WILLIAM McDONALD, MFA, cinematographer of documentary and dramatic films that have aired nationally on PBS and cable
- ♦ **Cinematography III: Painting with Light** with EARL RATH, ASC, director of photography
- ♦ **Cinematography IV: Camera Operating and Interior and Exterior Lighting** with EARL RATH, see credits above

Gain a Competitive Edge

- ♦ **The Knowing Eye: Visual Aesthetics for Film, Television, and New Media** with MARTIN ISAACSON, art and media consultant
- ♦ **Basic Lighting for Film and Video** with FRED MARTIN, director of photography in feature films and industrial video whose clients include HBO and The Gas Company and CHRIS TALLEN, director and director of photography whose clients include A&E Network and GTE

Post-Production

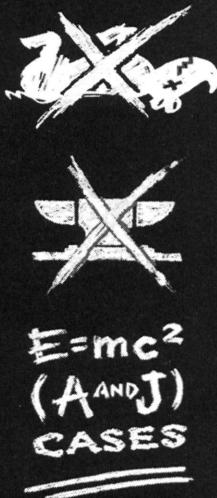
- ♦ **Understanding the Telecine Process: Creative and Technical Aspects of Film-to-Video Transfer**, HOWARD SISKO, telecine colorist with more than 17 years experience
- ♦ **Understanding the Telecine Process: A Workshop**, HOWARD SISKO, see credits above
- ♦ **Workshops in non-linear editing systems using Avid, Lightworks, and D-Vision**

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On the Spot

For its "Winds of Change" campaign, Hyundai Motors of America asked director Graham Henman and cinematographer David Knaus, ACS to dramatize the "Best Buy" rating its new Elantra garnered from *Consumer Digest* magazine. The filmmakers did just that by literally creating some gusty gales on film.

The 30-second commercial "Newsstand," the fourth spot in this series, opens with a man on Wall Street perusing a newsstand as an Elantra pulls up. Suddenly, a mystery gale kicks up, turning the papers and magazines into a swirling vortex. When the gust dies down, a copy of *Consumer Digest* lands at the man's feet, open to the Best Buy story touting the Elantra. Impressed, he glances over to check out the car, only to see it peeling away. He then discovers that the newsstand is completely intact, and wonders if the incident was mere fantasy — until the clerk asks him to pay for the copy of *Consumer Digest*, which is still in his hands.

The "Winds of Change" project kicked off with a debate about whether the whirlwind of paper should be shot practically or created with digital effects. After extensive testing at

The new Elantra leaves a digital whirlwind in its wake.

Planet Blue Hollywood, the filmmakers chose the latter option. Creating the ef-

fect from scratch, CGI artist Mat Merkovich modeled wrinkled-up paper in Lightwave; visual effects compositor Maury Rosenfeld then animated the effect and composited three shots for the finished spot. Recalls Rosenfeld, "We first tried a cartoon-version V-shaped cone of paper, and then a very loose, absolutely naturalistic vortex. The design we finally chose is somewhere in the

Hyundai's Elantra Kicks Up a Twister

by Mary Hardesty

middle; it's a bit magical, but not totally implausible.

"To add to the effect's credibility, we tinted the swirling paper orange to reflect the newsstand's lighting, and matched the color temperature of the key and fill lighting as closely as possible so that objects in shadows would have the right tonality," Rosenfeld adds. "Thanks to Graham and David's sense of lighting and balance, we had great bluescreens



to work with, and we could generate the scenes photo-realistically: from the first street-level shot as the paper begins to blow, to the close-up of the spinning vortex, and then all the way up to the high-angle shot, which was a mixture of bluescreen and CGI elements."

According to cameraman Knaus, principal photography was as challenging as the post process, partially because the spot's budget allowed only a two-night shoot in front of the New York Stock Exchange building. "I couldn't do any pre-lighting, because we weren't allowed on the street until the end of business each day," he explains. "We had to completely pack up in between each night's shooting, and be fully wrapped by 5 a.m. That meant we only had about five to six hours of shooting time, since it took almost three hours each night to set up and light."

On the first night, Knaus shot the scenes on Wall Street facing in one direction, doing all of his reverse angles on the next night; his radius on the upscale thoroughfare spanned some four blocks. "We sent a scout there to take pictures at half-hour intervals all night long, so we could see when the various buildings' interior and exterior timed lights went on and off," remarks Knaus. "The last thing you want is to be shooting at 2 a.m. and have the entire building in the background go black on you and ruin your continuity."

"Because we had to light such massive areas, as well as all of the buildings surrounding Wall Street, I had a Musco and three 80' Condors with 18K HMIs," says Knaus, who had to order three generator sets since the lights were situated so far apart. "We also needed a Fisher crane to put a light above the car, but to rent one and bring it in and out each night would have been prohibitively expensive. Instead, my grips actually built a homemade Fisher light on location in front of Wall Street every night. That was the only piece of equipment the city gave us permission to leave on the sidewalk overnight."

Knaus' only annoyances with this setup occurred during the filming of wide shots: the cinematographer had to keep reflections of the Fisher light from appearing in the building's windows, but he was not permitted to black out any of the panes along the Stock Exchange.



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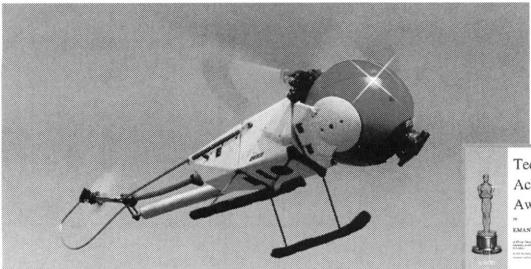


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"They have incredibly tight security there now," he says. "The lighting was this horrible fluorescent green color, but it didn't end up looking as bad as we thought it would."

The cinematographer filmed "Newsstand" on Kodak's Vision 500 stock with a Panavision camera outfitted with Primo lenses. No filters were used on the HMLs, adding a decidedly blue cast to the spot, but $\frac{1}{4}$ CTO gels were used to add a touch of warmth to the lighting for the car and the magazine stand.

Pressed for time, Knaus shot all of the blue- and greenscreen shots of the papers and *Consumer Digest* magazine swirling around during the last hour of filming, using a Ritter fan to create his practical vortex. "We had someone throwing magazines at the actor's feet, and we also hung several magazines by wires in front of a bluescreen we put up at the location," he recalls. "Most of the elements in the whirlwind shot are actually just simple bluescreen mattes, and on top of those multiple mattes is a CG layer of a swirl. The small papers moving around really quickly under the real papers are also CGI."

One of the reasons Knaus managed to wrap "Newsstand" on schedule was that Planet Blue had been given storyboards beforehand. This allowed the Planet Blue staff to make suggestions which helped the shoot run smoothly, and also lessened the cost of the postproduction process. "For this spot, we suggested photographing the plates with practical paper blowing around, and also without the paper," points out Rosenfeld. "All of the shortening and perspective work was done by David. If these things are built into the shot, the end result always looks more realistic." ♦

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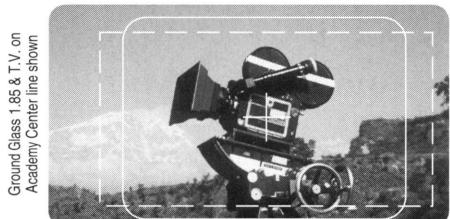
There are both 1000 ft. and 400 ft. displacement type magazines. A new feature is the light valve which allows the operator to direct all the light to the viewing system, or to the video assist, or combo which splits the light between both viewing and video assist.



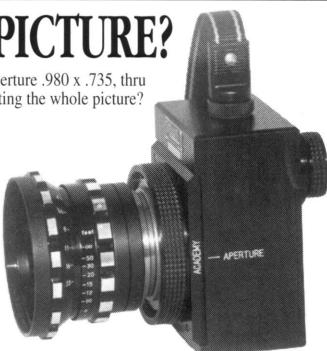
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Length: 30 seconds

Director: Graham Henman

Cinematographer: David Knaus, ACS

Agency: Bates USA West

Production Company:

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CGI/Visual Effects:

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compiled by Lisa Sibert

New Softboxes and Multi-Light Connector

Photoflex Inc. announces three new additions to their line of softboxes: the Whitedome FV, the XL Silverdome and the Quik-Release Corner.

The Whitedome FV is a translucent, omni-directional softbox for hot-lights or strobes that produces a bright, diffuse light ideal for full-room sets and other large subjects. The Whitedome FV provides a large area of even light coverage suitable for videographers filming interviews, large groups of people, or TV sets. The Whitedome FV is available in three sizes: small (16" x 22"), medium (24" x 32") and large (36" x 48").

The XL Silverdome, with dimensions of 54" x 72", is designed for use with constant light sources and can accommodate up to 4000 watts. When used with Photoflex's new multi-light connector, the 4 Star (see below), the photographer/videographer can use up to four Starlites in the softbox. Four heat vents, one on each side of the dome, provide for maximum air flow, making the Silverdome resistant to high heat levels. The XL Silverdome comes complete with recessed and removable front diffusion face, highly-reflective silver interior, flexible two-piece shock-corded aluminum rods, and a handled carrying bag. The two-piece rods make it possible to fold the dome in half, down to 9" x 28", for storage.

The new softbox Quik-Release Corner design makes tear-down easier via strong Velcro tear-away tabs on all four corners of the softbox. To disassemble the dome, simply lift one of the tabs; the first support rod is automatically released, relieving tension on all four rods.

Photoflex has streamlined all models and sizes (except extra-large) of the softboxes to include bullet-tipped steel support rods. The rounded, bullet-shaped tips prevent the possibility of the rods poking through the corners of the

fabric. These steel rods are also more flexible and more resistant to heat than the previous fiberglass design.

Photoflex also announced the new 4 Star Connector FV, a multi-light connector which allows you to attach up to four Photoflex Starlites to the softbox. Use of the 4 Star provides you with extra control over the lighting, as you are able to use one, two, three or all four Starlites in a photo shoot without changing the setup. The 4 Star also gives the user added control over the desired level of power: the 150-watt, 250-watt, 500-watt and 1000-watt bulbs are all conveniently interchangeable, and the Starlite's in-cord switch allows you to change output easily and at any time. The 4 Star works in conjunction with Photoflex's XL Silverdome for maximum efficiency, output and coverage.

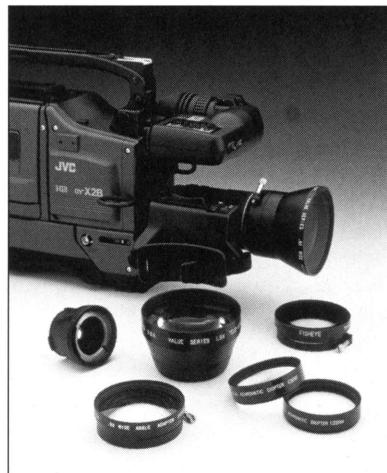
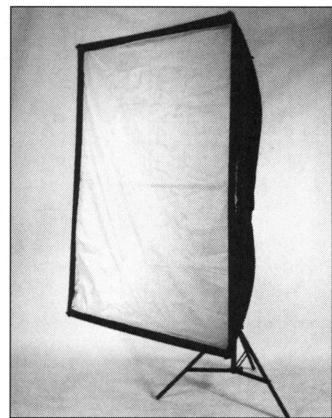
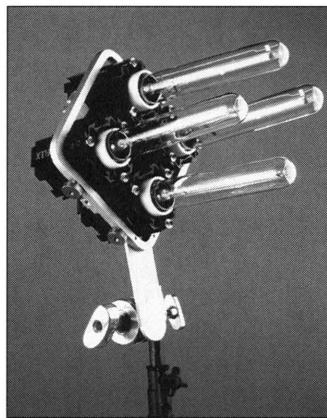
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Value Series Lens Accessories

Century Precision Optics introduces the Value Series family of high-quality, lightweight accessories for detachable zooms with 65mm or 75mm lens fronts.

The Value Series .6X Wide Angle Adapter mounts directly to the front of a video zoom lens, increasing coverage by 40 percent. When zooming is not needed, the Value Series .6X provides a significantly wider angle of view with very little distortion.

The .8X Wide Angle Converter is designed for shooting situations requiring both a wider angle of view and full zooming capabilities. Attaching the .8X to the front of a lens provides 20 per-



cent more coverage when set to wide-angle, telephoto, or any setting in between.

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Value Series Achromatic Diopters, also called "macro zoom attachments," are available in +2.0 and +3.5 magnifications. Achromatic Diopters can be used in situations that require tight focus on a small object in tabletop, miniature and flat-field videography. Adding them to the zoom with a lens front provides greater close-up range and magnification while maintaining zoom capabilities, without compromising image quality.

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CamPole allows camera operators to capture close-ups when it's difficult to approach a subject — as when shooting from a moving vehicle, over the heads of a crowd, underwater, 20' in the air or into a tiger's cage.

The tubing mounts together with a bayonet system and may be custom-configured to specific shooting situations. CamPole SL extends to 15.5', while CamPole XL extends to 22'.

CamPole's pan, tilt, and focus are adjusted from a convenient control box. With CamPole SL, the control box can be affixed to, and moved along, the tubes, fixed separately to the handgrip.

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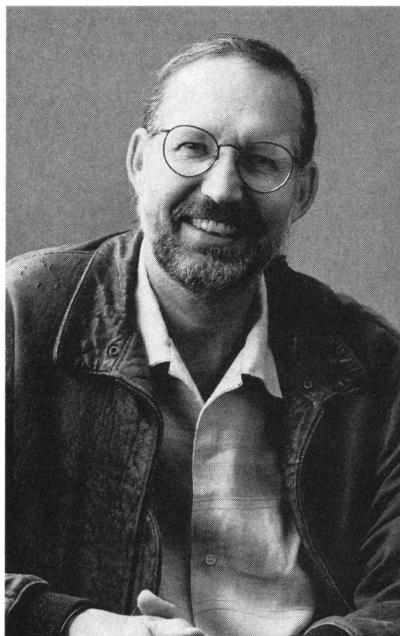
“I started out working for four years at what was then the best rental facility in Hollywood,” says Director/Cameraman John Le Blanc, “Followed by thirteen years as a First AC. I have a trained eye for corner cutting at rental houses.”

“When I began cleaning tripods there in the late Sixties, Mark Armistead was the standard of the industry for camera equipment,” says John Le Blanc.

“Their reputation got me my first camera crew job in 1973; the DP knew I had been trained at Armistead. Because of that, he even hired me as a First AC. I spent thirteen years assisting. I got to work with (and learn from) DPs like Laszlo Kovacs and Vilmos Zsigmond.”

“Four years at the World’s most meticulous rental place had taught me what to look out for when I began prepping. I had no say as to where the cameras should be rented, of course, so I prepped everywhere. At first, no place was up to the Armistead standard; most didn’t come close. But quite soon Panavision surpassed it in sophistication.”

“However, having worked in one, I could never take anything for granted at *any* rental house. At every prep, my attitude was



skeptical, to say the least. And I soon learned which places were cutting corners.”

“After ten years of skepticism, I realised in the early Eighties that I’d started to take some things *almost* for granted when I prepped at Clairmont Camera. The old Armistead way had been to do things honestly and thoroughly. I began to recognise the same way of doing things at Clairmont.”

“In 1986 I became a DP. Things at Clairmont were even better—more custom gear that was faster to work with, the same old impeccable maintenance. By 1990 (when I became a Director/Cameraman) Clairmont’s equipment had become a seamless system. Since 1986, I’ve been able to pick the rental house on about 90% of my jobs,” says Mr. Le Blanc. “That 90% has gone to the Clairmonts. I trust them completely.”

John Le Blanc has shot 65mm 60 frames/sec. for Showscan and VistaVision 3D for Universal Studios. He won a Golden Lion at Cannes for his cinematography on a series of commercials for AT&T. He was 2nd Unit Director/Cameraman on the features *Cocoon*, *Prisoner Of Honor* and *The Outsider*. He is now directing commercials for November Films.

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Innovision Optics, (310) 394-5510, Fax (310) 395-2941; Online: www.innovision-optics.com.



Quick Zoom Added

Fujinon has added a new quick-zoom function to its AT2 family of ENG lenses. In addition to Aspheric Technology, V-Grip and a new inner-focusing system, Fujinon's A10X4.8EVM, A15X8EVM and A20X8EVM lenses' quick-zoom feature allows simple, accurate focus setting.

After a camera operator frames a shot, a push and hold of the quick-zoom button initiates a fast zoom to the telephoto position, allowing the operator to make a quick, accurate focus setting. Upon release of the quick zoom button, the lens automatically returns to the initial frame position.

The Fujinon lenses featuring the quick-zoom function are the A10X4.8EVM Wide Power handheld ENG lens, the only ENG broadcast lens providing an 85-degree horizontal range of view; the A15X8EVM handheld ENG zoom lens; and the A20X8EVM telephoto ENG zoom lens. Each of these lenses also feature the company's exclusive V-Grip, which allows camera operators to adjust grip positions in five steps to balance any load from lightweight camera/lens packages to camcorders.

Fujinon Inc., (800) 553-6611, fax (201) 533-5216.



Porta-Brace Video Vest

K & H Products introduces its new Porta-Brace Video Vest. Tailored for field photographers — specially for ENG and EFP photographers — and sound technicians, the vest is made of mid-weight waterproof Cordura fabric with a soft inner layer. There are pockets for batteries, tapes, tools, passport and wallet, ID, pens, rain slicker, lunch or even a big cigar. Adjustable side tabs allow for extra room in the fit. Additional side zippers provide extra freedom when needed.

K & H Products, (802) 442-8171, Fax (802) 442-9118.

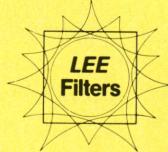
Sachtler Accessories

Sachtler AG introduces a new support for shoulder cameras — the Sachtler Monopod 2 CF — which combines popular, lightweight carbon-fiber technology with quick, easy handling. A two-stage carbon-fiber leg is either fitted with a Betacam quick-release system or with the Sachtler Touch & Go. The Betacam quick-release system enables



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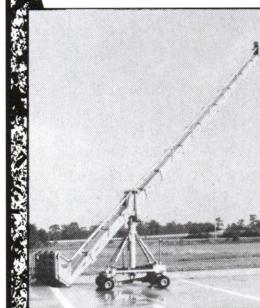


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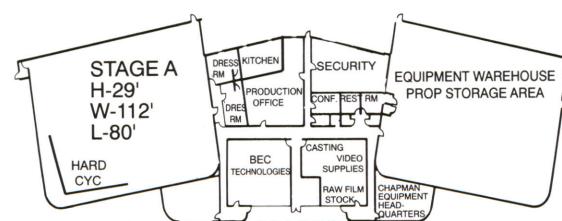
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the cameraman to keep on using the camera's integrated shoulder support. This saves a lot of weight, since the camera manufacturer's tripod adapter plate is no longer needed; small tilt movements as well as good camera control are now possible even without a tripod.

Sachtler has also introduced a Dutch Head for video. The Dutch Head add-on has been developed for the proven ENG fluid heads Video 18 Plus and Video 20 Plus, and enables the camera to tilt the horizon. The Video 18 Dutch comes with a cross-sliding plate with a 60mm sliding range to provide for precise camera control. Thus, the camera's center of gravity can be exactly aligned over the swiveling axis; the Video 18 Dutch can also be used on top of Sensor and Caddy heads.

Sachtler (in Germany), (089)-3-21-58-200, Fax (089) 3-21-58-227



UV 3-D Scenic Effects

Ultra-Violet Visual Effects specialists UV/FX Scenic Productions of LA announces UV/FX 3-D Scenery, a device which makes it possible for stock or custom-designed scenery to glow under UV (blacklight) illumination. When coupled with 3-D glasses, this look features complete depth perception and color separation for visual effects. The new UV 3-D scenic technique can be used for glowing panels, wallpapers, murals, drops, ceilings, exhibit pieces and more, and can also be designed to be visible, partially visible or completely invisible under ambient lighting situations; the scenery undergoes a dramatically transformation with the introduction of UV lighting.

UV/FX Scenic Productions, (310) 392-6817, Fax (310) 392-6817; Online: www.earthlink.net/~uvfx.

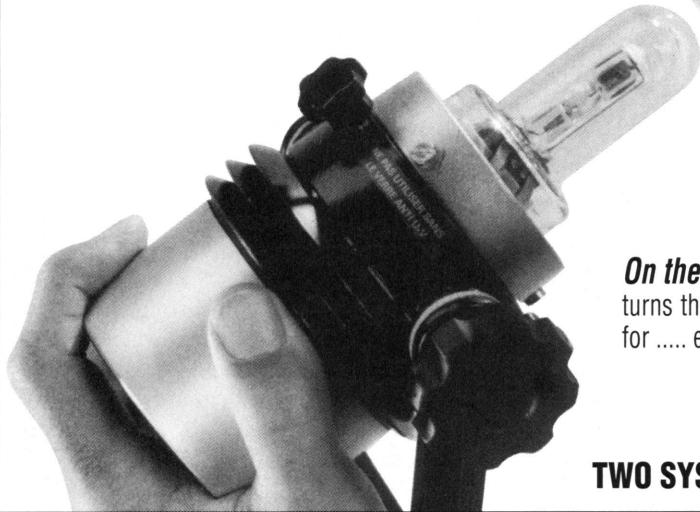
Video-Pod by Matthews

Matthews Studio Equipment, Inc., recently introduced their new Video-Pod system at ShowBiz Expo West in Los Angeles. The Video-Pod offers the videographer a high-perspective camera

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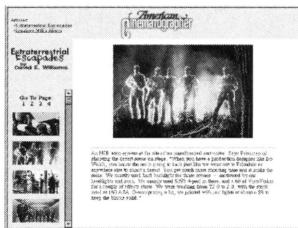
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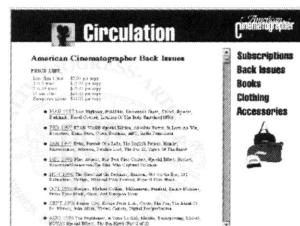
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WHAT'S NEW THIS MONTH:

- E-mail cinematography questions to Guillermo Navarro about his latest film, *Spawn*.
- Expanded coverage of French filmmaker Claire Denis' new film, *Nénette et Boni* — a lyrical tale about an estranged brother and sister — as detailed by director Denis and cinematographer Agnès Godard, AFC.
- Post questions to ASC members or to the world on our cinematography bulletin boards.



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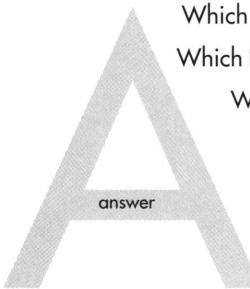
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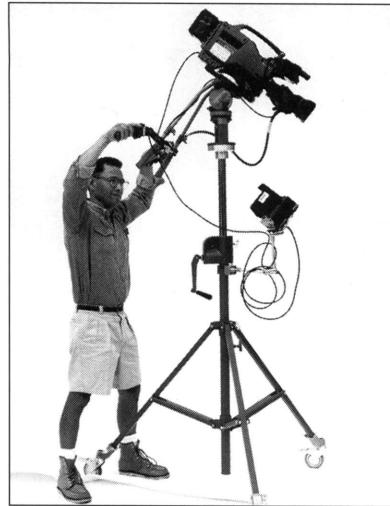
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platform with stability and mobility.

Utilizing a modified Matthews Light Lift rolling stand as the camera platform, the Video-Pod mechanically raises the camera to a maximum height of more than eight feet. Using either a claw ball or flat base camera mount, the videographer will be able to raise the camera above a crowd. By attaching a small studio monitor to the stand for tracking, the operator will have a distinct advantage over other tripod or shoulder level videographers. The Video-Pod rolls easily on four-inch ball-bearing caster wheels.

Matthews Studio Equipment, Inc., (800) CE-STAND, Fax (213) 849-1525; E-mail: edphil@earthlink.net.

LentEquip Director's Station

LentEquip Film and Video of Toronto, Ontario, announces its new, compact Director's Station, which allows the user to better view video assist monitors on the set. The Station features a split front door and integrated sunshade that eliminates the necessity to construct shielding from the sun. The lower portion of the door folds open to serve as a page/script holder.

Two models are available, one featuring a modified Sony KV-9PT60 (with video OUT). The other is based on broadcast quality components from Sony: the PVM-8041 monitor with TU-1041U UHF/VHF tuner. Both Stations have AC/DC inputs and video connections mounted externally, a function which greatly eases the cabling required to the unit. The Director's Station mounts to a standard 2K stand via LentEquip's

original base plate. The base plate itself features four mounting locations, +/- 15 degree tilt, zero degrees and a horizontal spigot part position. The spigot is secured to the base plate via a stainless steel ball-lock pin. Other convenient touches include an external antenna connection and drink holder.

LentEquip Film and Video,
(416) 406-2442, Fax (416) 406-2443.

Kiwi Video Assist

The Monty, a new, complete video assist package developed in New Zealand, allows directors to utilize all of the elements of their shoot on-set.

The Monty's non-linear Shot Assembly enables full control of in/out points and transitions between shots, and allows for "shot one" to be assembled next to "shot two" for confirmation that the cut is working (there is no limit to the number of shots that can be assembled). For example, a rough cut can be made up on the day, printed to tape and taken to the editor with corresponding slate and take numbers.

The system also features flip/flop for single or both images — an important process for bluescreen work — so that now a previously shot image can be flopped and mixed with the live image.

Full range of varispeed playback, from +/- 10,000 percent, will cover instant playback at any camera speed. One could mark in/out points to determine the exact allotted screen time.

Because the images are stored on a hard drive (as well as tape), they can be recalled at the click of a mouse. There is unlimited hard-drive space for storage.

All facilities offered in the package are available instantly (no rendering) from chroma key to dissolves. The system features audio playback via a 10W audio monitor, and "mood music" may be played back via CD, tape or radio. The video mixer allows for mixing/over-laying with hundreds of wipe patterns, and allows for multiple layers to be applied (essential for bluescreen work).

Alex Claydon (in New Zealand), 64-9-489-8641.



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Calendar of Events

Rocky Mountain Film & Video Expo

This year's Rocky Mountain Film & Video Expo, to be held October 1-2, is placing special emphasis on new digital technologies. Those attending the show can meet over 150 exhibitors, representing every aspect of film, video, audio, multimedia and production partnering. These include industry leaders such as Sony, Avid and Panasonic. In addition, the Expo's conference series will include professional seminars and "Short Takes" — quick presentations held on the show floor which will cover a wide variety of subjects, including production, postproduction, audio, digital technology, and business issues such as marketing and financing.

Also featured will be a special keynote presentation by David Layne, director of broadcast operations and engineering at Denver's KCNC-TV, on the switch to HDTV; in addition, the Expo will include a multimedia showcase, where the latest in digital software and equipment will be on display, including digital still cameras, web-page development tools and desktop publishing software and equipment. Another specialty area — Project Alley — will offer side-by-side benchmarked comparisons of the latest products, including video and data, data only and multi-scan graphics projection capabilities.

Rocky Mountain Film & Video Expo, (303) 771-2000.

IDA Awards

The International Documentary Association has issued a call for entries for the 1997 Distinguished Documentary Achievement Awards competition. Presentations will be made at the 13th Annual IDA Awards Banquet on October 31.

Nominees will be selected in four categories: long form (longer than 40 minutes), short form (40 minutes or less), limited series of up to 12 episodes, and single programs in an on-going stand. For eligibility, non-fiction films must have been completed, or had primary cinema release or telecast, between January 1, 1996 and April 30, 1997.

The IDA has also called for entries in the 1997 David L. Wolper Stu-

dent Documentary Achievement Award, which recognizes exceptional student achievement in documentary production at the University level. In addition, the IDA will include outstanding entries on the 1997 IDA/David L. Wolper Student Documentary Achievement Reel.

IDA Executive Director Betsy McLane announced that all entries in any category will be eligible for two new awards. The IDA/ABC News Video-Source Award will be presented for the best use of news footage; the prize includes a \$2,000 honorarium and \$2,000 worth of research time at the ABC News VideoSource facility in New York. The IDA/Pare Lorentz Award will be presented to the film that best reflects the democratic sensibility, activist spirit and lyrical vision of Pare Lorentz (1905-1992); this prize is a \$2,500 honorarium.

The IDA will also present the 1997 IDA Career Achievement Award and the 1997 Preservation Scholarship Award. The latter is presented to an individual for outstanding lifetime achievement in either education or preservation in the non-fiction genre. (The IDA Distinguished Achievement Awards have been solely sponsored by the Eastman Kodak Company since their inception in 1984.)

For more information about the IDA Distinguished Achievement Awards, contact Pam Steinman, IDA Awards Coordinator at 1551 S. Robertson, Suite 201, Los Angeles, California 90035-4257; or call (310) 284-8422, ext. 9; Fax (310) 785-9334; E-mail: idf@netcom.com.

Third International Documentary Congress

The third International Documentary Congress will be convened in October, 1998 by the Academy of Motion Picture Arts and Sciences (AMPAS) and the International Documentary Association (IDA), according to AMPAS President Arthur Miller and IDA President David Haugland. The event will be held at the Academy's Beverly Hills headquarters from October 28-30, 1998.

The most recent International Documentary Congress was held in October of 1995; the first was held in 1992. Hiller declared both of them extraordinarily successful, with the 1995 congress

attracting 1,200 filmmakers, students and non-fiction film enthusiasts from 17 countries.

Like its predecessors, the third International Documentary Congress will include three days of panel discussions, round tables and "At One With..." sessions in both the Academy's Samuel Goldwyn Theater and the Academy Little Theater. A planning committee of Academy and IDA members appointed by the organization's two presidents of the two organizations will be co-chaired by Haugland and filmmaker Michael Apted, and includes John Bailey, ASC, Charles Burnett, Marina Goldovskaya, Karen Ishizuka, Lynne Littman, Tracy McArdle, Arnold Schwartzman and Walter Shenson. IDA Program Coordinator Grace Ouchida will act as coordinator for the IDA, and Academy Program Coordinator Tracy Fowler will serve on behalf of the Academy.

For more information, contact Leslie Unger at the AMPAS, (310) 247-3000; E-mail, lunger@oscars.org.

Indigenous Film/Video Expo

The Board of Directors of the Native Americas International Film Exposition (NAIFE) has announced the final dates for the Second Annual Indigenous Film/Video Festival. With the theme "It's Not All Black-and-White," this year's expo will take place from October 10-13 in Santa Fe, New Mexico. All of the events are open to the general public.

This expo is the premiere opportunity for filmmakers and video-graphers to showcase work by, about and with the indigenous peoples of the Americas. The festival's highlight will be an awards ceremony scheduled to take place the evening of Sunday, October 12: awards will be given for dramatic feature, documentary feature, dramatic short, documentary short, experimental animation and new technologies.

NAIFE founder David Sontag refers to the expo as "the creation of a new community where ideologies, politics and borders could be transcended, and we could develop a process to honor the people, their cultures and the filmmakers."

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up the events of the exposition. Panavision is scheduled to provide a unique workshop in cinematography.

To attend the screenings, festival organizers will be charging a \$5 per person/per screening, and \$40 for related industry workshops. The site sponsor for the expo is United Artist Theaters. All events are expected to take place at the DeVargas 6 Cinemas on North Guadalupe in Santa Fe.

NAIFE, (505) 983-5220, Fax (505) 983-7847.

The Taos Talking Pictures Festival

The Taos Talking Pictures Festival will be held from April 16-19, 1998, in Taos, New Mexico. Established as an artists' colony more than a century ago, Taos is known for its eclectic mixture of cultures, traditions and philosophies; it is in this same spirit that festival organizers program over 100 new independent films and videos, including features, documentaries and shorts during the four-day festival. Some highlights include Tributes, Open Sheet screenings (a come-one-come-all showcase for emerging filmmakers), Hispanic and Native American programs, and a comprehensive Media Literacy Forum that offers attendees panel discussions, workshops and demonstrations focusing on the state of the media.

Of special interest is the Taos Land Grant Award of five acres of land to be awarded to a narrative, documentary or experimental film (70 minutes or longer) which takes a fresh approach to storytelling and/or the cinematic medium. Entries should have been completed within 18 months of the festival. Acceptable production formats are 16mm, 35mm and video.

The entry fee is \$15-\$25 and the entry deadline is January 15, 1998 (only 1/2" VHS submissions accompanied with an entry form will be accepted). For further information, contact Kelly Clement, Director of Programming, or send a SASE to Taos Talking Pictures — Submissions, 216M North Pueblo Rd. #216, Taos, NM 87571.

Taos Talking Pictures, (505) 751-0637; Fax (505) 751-7385; E-mail: ttpix@taosnet.com; Online: <http://www.taosnet.com/ttxpx/>.

Points East

After 60 homicides, Jean de Segonzac has finally gone to prison.

The cinematographer/director, who has attracted notice for his swooping, fluid and highly intuitive Super 16 camerawork on NBC's long-running, critically-acclaimed series *Homicide: Life on the Street* (see AC October 1995) has moved on after shooting 60 episodes (and directing a handful) of the acclaimed police drama set and produced in Baltimore. De Segonzac spent the past spring ensconced in a large, realistic prison set located on the sixth floor of a building adjacent to Manhattan's colorful meatpacking district, as director of photography and occasional director of HBO's first dramatic series, *Oz*.

The New York-bred cameraman made the trip to *Oz* from *Homicide*



at the behest of the duo producing both shows: feature director Barry Levinson (*Rain Man*, *Sleepers*, the upcoming *Sphere*) and writer/producer Tom Fontana. De Segonzac's feature credits as a cinematographer include John McNaughton's recent film *Normal Life*; the Roger Weisberg documentary *Road Scholar* (1993), a chronicle of social commentator Andrei Codrescu's 1968 road

trip across America; and Nick Gomez's no-budget indie sleeper *Laws of Gravity* (1991), which put the upstart New York mini-studio The Shooting Gallery on the cinematic map.

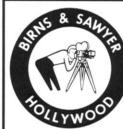
The Man Behind the Curtain of HBO's *Oz*

by Eric Rudolph

Oz takes place in a large fictional prison, the Oswald Penitentiary, where the state has built an experimental wing with no bars — which inmates have dubbed "Emerald City." The facility's glow doesn't last long, however, and the new environment rapidly begins showing its own set of deadly flaws.

As in the fictional city the high-concept jail is named after, events at the *Oz* set are not always what they seem. Visitors to the set might understandably assume that de Segonzac the director was also serving as director of photography and camera operator: in addition to supervising lighting setups prior to rehearsing the actors, de Segonzac could also be seen operating a handheld Aaton XTR Prod camera during takes. "One is not allowed to be the director and director of photography at the same time in episodic television," de Segonzac says, explaining that he officially is only directing the episode, despite appearances to the contrary. "We're shooting 62-page scripts, with 96 scenes, in seven days, so for me to try to explain to an operator the tempo and feel of all the moves in a complicated handheld shot would simply take too long. It is much quicker for me to just grab the camera and do it myself. Also, I know what I want for the lighting, so I make suggestions there for the sake of speed as well." Laughing, he adds, "To be truthful, I'm really only happy with my versions of complex handheld shots."

Of course, de Segonzac's de-



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William Hines. 1997. 255 pages. Soft cover. \$24.⁹⁵

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sire to personally control the camera while directing does offer some practical benefits. "Having the camera in my hand creates an enormous advantage for me as a director, because I can see what is going on very clearly through the lens," he says. "If things aren't going well, I can immediately say, 'Let's do it again' or [tell the crew] at the end of a scene, 'I'm not about to cut; go back to one and let's go again.' It gives the work a lot of energy and keeps the actors on their toes."

Then again, de Segonzac does admit to a special fondness for operating that transcends any practical considerations. "The pleasure of photographing scenes myself, camera in hand, is a part of filmmaking that I love. If I could never operate, it would be limiting to me as a filmmaker."

On *Homicide*, de Segonzac operated the handheld camera almost all the time, but he notes that "*Oz* has a more formal look. The photographic style of *Homicide* is totally in-your-face and intuitive. On *Oz*, we use dollies a good bit, so I have to give up the camera at those times. I'm operating on maybe 30 percent of the scenes overall."

Like *Homicide*, *Oz* is being shot in Super 16. "I don't see the point of shooting in 35mm for television, where film prints are no longer made," de Segonzac submits. The larger gauge also does not suit his highly mobile camera style. "The 35mm cameras are bulkier, and you can't move anywhere near as quickly or as fluidly as you can with 16mm equipment."

Three seasons of shooting a prime-time broadcast network series on 16mm have underscored the importance of using a lab that gives priority to the narrower gauge. "Most labs don't take 16mm seriously," the cameraman opines. "The lab I prefer is Colorlab in Maryland, which processed the *Homicide* footage I shot. However, we had to use a New York lab for *Oz*, so we chose Du Art."

The massive *Oz* set was specifically designed, with de Segonzac's input, to have most of the lighting built in as practicals. Two parallel rows of 8' tungsten-balanced fluorescent fixtures were built into the eaves above rows of glass-doored cells: one row was designed to be seen in shots as part of the prison's ostensible lighting, while the second row was fitted with quarter-inch

honeycomb diffusers so the fixtures would add additional footcandles without being read as practicals in eye-level shots. Another 150 fluorescent tubes (all tungsten-balanced) were hung out of normal camera range 22 feet above the main Emerald City floor.

The result of this preparation is that de Segonzac needs to do "almost no additional lighting at all" in the large main Emerald City set. "We'll use a fluorescent eye fill, bounce cards and some edge lighting, but it is minimal. We actually found that using all of the fluorescent lights that hang above the main floor was too much, so we only turn on every other one. We still get at least an f4 with our f2.8 10-52mm Cooke zoom using Kodak's 7279 Vision 500 ASA stock, a wonderful emulsion which we have used exclusively throughout the production of *Oz*."

Very little additional lighting is brought in for nighttime scenes set in the darkened penitentiary. "We generally use only two Pars, one aimed at the floor and one on the elevated control area, and maybe a few Kino Flos," de Segonzac details. Kino Flos are also used extensively on the other *Oz* sets, which include administrative offices and a large cafeteria. He notes, "Overall, the lighting has an institutional, gritty, contrasty and claustrophobic feel, but it's supposed to be that way; after all, it is a prison."

Immediately after wrapping the initial eight-episode commitment of *Oz*, de Segonzac headed to Toronto to direct an ABC telefilm based on basketball star Dennis Rodman's book *As Bad as I Wanna Be* (which will be shot by Michael Fash, BSC, whose credits include *The Whales of August* and *Britannia Hospital*). De Segonzac was able to convince the producers to let him shoot in 16mm, which he thinks will be a great plus for the basketball scenes. "I hope to do some operating on the Rodman film as well," he says.

In the end, de Segonzac concedes that his strong desire to control the onscreen image is leading him away from cinematography and toward directing. "As I began working on bigger projects I found that I was often left with only the lighting to control, as the directors composed the shots. I like to control the camera movements precisely, so I'm just going to have to direct more often."

Books in Review

by George Turner

Without Lying Down

by Cari Beauchamp
Lisa Drew/Scribner,
475 pps., hardback, \$30

Once in a great while, someone has the gall to suggest that movies aren't just conceived by directors and actors as they go along. Among the "shadow people" who help the folks up front put together a viable product are the screenwriters. When the Oscars are being parceled out to writers, the presenter usually serves up a few platitudes along the lines of, "In the beginning, there was the word." Moments later, the writers lapse back into obscurity until the next year's awards.

Frances Marion was an exception. Between 1916 and 1946, she wrote at least 325 screenplays and original stories of every imaginable genre (more likely around 365 when some uncredited early silents are included), and "doctored" many scripts anonymously. She also produced and directed a dozen features, acted, served as the head of West Coast production for Hearst Cosmopolitan Pictures and in her later years worked as an editorial assistant to Louis B. Mayer at MGM.

Marion also became the first woman writer to win an Academy Award, which she received at the 1930 ceremony for *The Big House* (she won a second Oscar two years later with her original story for *The Champ*). Aside from her film work, she was an accomplished artist and sculptor, a war correspondent during World War I (she was the first woman on the Allied side to cross the Rhine), a concert-class pianist, and a suffragette who joined a march on Washington. If that wasn't enough, Marion was also a beauty.

Amazingly enough, she found time to have four husbands, two children and a dozen lovers. Among the husbands was her great love, Western star Fred Thomson, whose death was probably the greatest tragedy of her life. (Under the pseudonym "Frank M. Clifton," she wrote

the screenplays for 11 of Thomson's superior Westerns.) Marion also became the bride of cinematographer-director George "Tripod" Hill, whose alcoholism drove him to suicide.

Marion was Hollywood's highest-paid writer for nearly 30 years. She had many friends, and her life was a mix of fun and tragedy. The only two people she actually seemed to despise were Louis B. Mayer and Joseph P. Kennedy.

Marion wrote an excellent autobiography, *Off with Their Heads*, which was published in 1972, a year before her death. Cari Beauchamp, who recently took a much-deserved whack at the Cannes Film Festival in *Hollywood on the Riviera*, has done a good job of telling a lot more of Marion's story, producing this well-researched and honest slice of Hollywood history with an all-star cast — and plenty of vintage gossip, too.

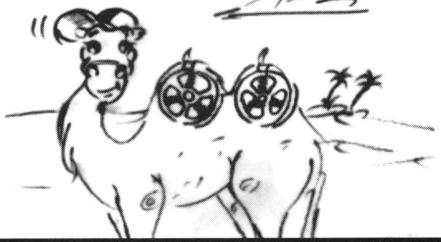
The Speed of Sound

by Scott Eyman
Simon & Schuster,
414 pps., hardback, \$30

The movie industry has survived many near-fatal upheavals during the past century, but none more devastating than the so-called Talkie Revolution of 1926-1930. Some years earlier, the emergence of radio as an entertainment medium had caused Hollywood's prophets of doom to howl that their patrons would drop the movie habit and stay home to listen to their radios. That panic proved to be a minor debacle, however, when compared to the moment when industry captains realized that they could either retool their studios and theaters to accommodate talking pictures — a very expensive undertaking — or seek other ways to make a living. During the advent of sound, studios were imperiled, hundreds of theaters closed, and many silent picture directors and stars fell by the wayside.

The Speed of Sound (subtitled *Hollywood and the Talkie Revolution*) reports on this tumultuous period about

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as completely as it can be covered in one volume. The research is copious, and there are interviews with a lot of the veterans who weathered the storm, including directors, actors, cinematographers, sound technicians and other vital personnel.

Eyman also has much to say about the studio chiefs who ushered in the talkies, especially for Jack Warner and William Fox, with the latter being described as "the most avaricious individual in the history of the motion picture industry," a distinction for which he had plenty of competition.

Ultimately, however, *The Speed of Sound* focuses upon how the movie industry managed to cope with the change from silent films to talkies, and how the creative people in the studios transformed the primitive new gabfests into the world's greatest form of entertainment.

Directing: Learn from the Masters

by Tay Garnett
Scarecrow, 332 pps.,
library binding, \$34.50

The late Tay Garnett was a highly versatile filmmaker who, beginning in 1928, directed 43 features, including *China Seas*, *Trade Winds*, *Seven Sinners*, *Mrs. Parkington* and *The Postman Always Rings Twice*, as well as a litany of TV shows. In 1973, upon the death of his friend John Ford, Garnett became determined to record the words of all of the finer directors for posterity. Toward this end, he sent questionnaires, each containing the same 23 questions, to many of his fellow directors. The project was still a work-in-progress when Garnett died in 1977, but the results were soon published in France.

The English version is now in print for the first time. Among the 43 directors who explain their working methods are Clarence Brown, George Cukor, Alessandro Blasetti, Allan Dwan, Howard Hawks, Henry King, Mervyn LeRoy, Louis Milestone, King Vidor, Robert Wise, Steven Spielberg, Martin Scorsese, William Wyler, and Jean Renoir.

During his own directing career, Garnett usually turned out a high-grade product, and this book can certainly be viewed as the final feather in his cap. ♦

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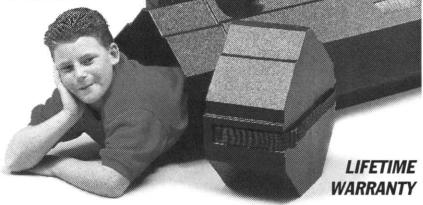
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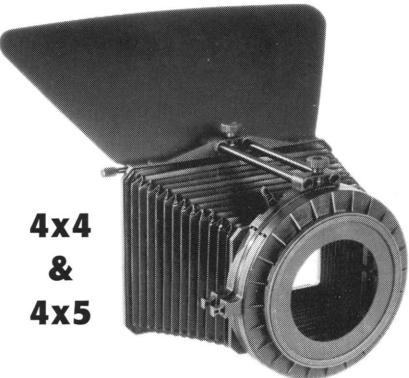
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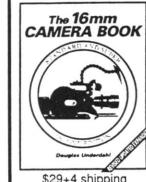
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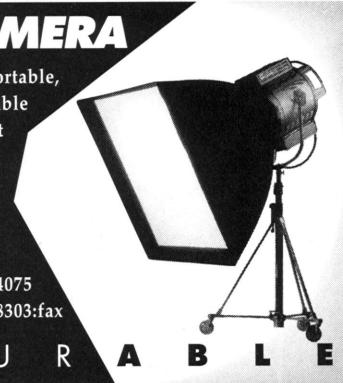


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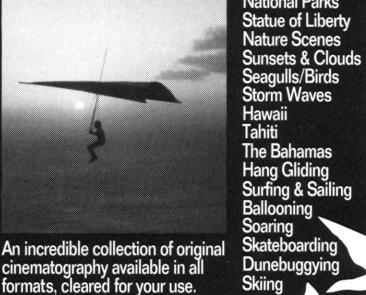
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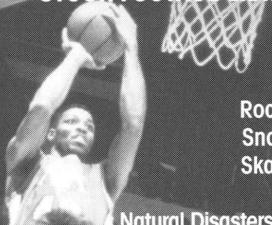


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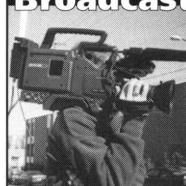


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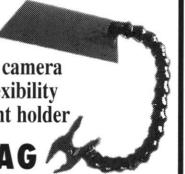
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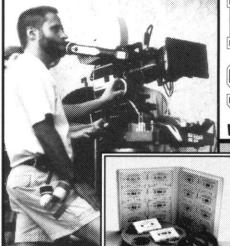
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September 1997

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From the Clubhouse

Finnerman Gives Back to the Industry

ASC Vice President Gerald

Perry Finneman, ASC recently made a \$300,000 donation to the Motion Picture Fund in the form of a charitable trust. "I want to do this while I am alive rather than when I'm gone, because I want to enjoy seeing the fruits of what I have done — which was only possible because of what this industry has done for me," Finneman reasons. "The trust will sponsor a room at the Motion Picture Fund Hospital, which I am dedicating to my mother and father, Renee and Perry Finneman, to the American Society of Cinematographers, and to IATSE Local 600."

The dedication ceremony will be held on Sunday, September 14 and a plaque will be unveiled. The event is open to ASC members, and a brunch will be served. The room is intended to be used for the physical rehabilitation of patients who have had treatments that require long hospital stays for recovery.

"The reason I'm doing this is not only because I strongly believe in the Fund, but because it was so good to my parents when they needed help," Finneman notes. "I can't forget those things." The cinematographer adds that he is also in the process of setting up a \$1 million foundation for children who need long-term medical care. "My charitable work has mostly been within the family of the motion picture industry," Finneman says, "because the Motion Picture Fund has done so much for our ASC members."

Schwartzman Joins ASC

John Schwartzman, a native of Los Angeles, was recently inducted into the ASC as an active member.

Schwartzman received his B.A. in Economics from the University of Colorado. He then attended graduate school at USC in the school of Cinema and Television. In 1985, while at USC, he was awarded the Focus Award for outstanding cinematography on a project he shot for a fellow student, Phil Joanou. Immediately upon leaving school, Schwartzman found work in the world of low-budget feature films, thanks in part

to the Focus Award and also to the changes the industry was going through at the time. Eager to practice his craft, he maintained contacts with both USC and the Art Center in Pasadena; he shot projects for student directors at both schools for free on the weekends, all the while building his career as a professional director of photography.

Schwartzman's feature credits include *Benny and Joon*, *Airheads*, *Mr. Wrong*, *The Rock* (see AC June 1996) and *Conspiracy Theory*. He is currently at work on the action-adventure film *Armageddon* with the same creative team responsible for *The Rock*, including director Michael Bay. — Lisa Sibert

Schreiber Honored with Kodak Vision Award

Nancy Schreiber, ASC received the 1997 Kodak Vision Award from Women in Film at the organization's Crystal Awards, held in Los Angeles on June 13. Schreiber was honored for her narrative film work and "unselfish dedication" to assisting other women striving for careers as cinematographers and camera-crew members.

Schreiber began her career as a gaffer, but after nine years began shooting documentaries, music videos and shorts. Her credits include the critically-acclaimed *Lush Life*; the essential cinematography documentary *Visions of Light*; *Chain of Desire*, which was nominated for an Independent Spirit Award for Best Cinematography; *The M Word*, which won the Best Feature award at the 1997 Avignon/New York Film Festival; and *Scorpion Spring*, featured at last year's Sundance Film Festival.

In 1997, Schreiber shared top documentary cinematography honors at Sundance for *My America...or Honk If You Love Buddha* (see AC April '97) and an Emmy nomination for the HBO film *The Celluloid Closet*. Schreiber currently has three independent feature films pending release: *Nevada* (see AC June '97), *Prairie Fire* and *The M Word*. She is currently shooting *Butter*, another project for HBO.

"I'm honored to receive the recognition from Women in Film and

Kodak, and am pleased that this organization recognizes cinematographers as significant contributors to the art of filmmaking," Schreiber said. "I hope this encourages other women to try to succeed as cinematographers, because diversity is important. I look forward to the day when all studio executives, producers and directors see me as a cinematographer, not as a woman cinematographer." — Bob Fisher

Photo by Alex Berliner.

**Allen Daviau,
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Schreiber, ASC.**

Ricotta Becomes Associate Member

Frank J. Ricotta, Sr., vice president of World Wide Technical and Engineering Operations at the Technicolor Corporation, recently became an associate member of the ASC.

A native of Rochester, New York, Ricotta graduated from the Rochester Institute of Technology. In 1973, he began his career at the Rochester headquarters of the Eastman Kodak Company. During his 14 years there, Ricotta was involved in both the amateur photofinishing and motion-picture markets. He joined Technicolor in 1987.

A past president of the Association of Cinema & Video Laboratories, Ricotta has been active in both local and national SMPTE activities, and was named a SMPTE Fellow in 1995. He is also a member of AMPAS, and was awarded an Technical Academy Award in 1996 for his contributions to the development of the Technicolor contact-printer sound head, which enables the simultaneous printing of all current analog and digital sound formats. Ricotta was a founding member/director of the Technology Council of the Motion Picture Industry, and is also a member of the British Kinematograph, Sound and Television Society.

Some recent feature films Ricotta has worked on include *Batman and Robin* for Warner Bros., *Amistad* for DreamWorks SKG, and *Bullworth* for 20th Century Fox. — Lisa Sibert ♦



Wrap Shot



There's not a glamour girl anywhere in sight in *Greed*, the picture that launched a thousand myths. The facts are almost as strange as the fiction. Erich von Stroheim was commissioned by Samuel Goldwyn to produce a movie version of Frank Norris' novel *McTeague*, a downbeat story about San Francisco's working poor. During 1924, von Stroheim spent nine months on location in San Francisco and Death Valley while making his epic, which he envisioned as a series of continuing features.

Along the way, however, Goldwyn sold his share of Metro-Goldwyn Pictures, and the new regime was horrified by the mammoth undertaking, which von Stroheim had edited to 42 reels. He then cut *McTeague* to 24 reels and refused to remove another frame. Rex Ingram, as a favor, cut it to 18 reels and then gave up. June Mathis carved it down to 10 reels, after which Joseph

Farnham performed the final edit. The 10-reel version was released as *Greed*.

This photo, borrowed from the collection of film historian Robert Birchard, is especially rare because it was taken during the filming of a major subplot that vanished *in toto* when the film was being chopped down. Shown at left is Cesare Gravina, the 5'-tall light-opera star from Napoli, in character as the crazed junk dealer Zerkow. Von Stroheim, prince of perfectionists, readies Gravina for his close-up. Behind the camera is Benjamin Reynolds, ASC, von Stroheim's favorite of all of the great cinematographers working during that era. Not shown is the second cameraman, William Daniels, ASC. The still was shot by Warren Lynch, later a noted special effects cinematographer and ASC member.

Even in its truncated form, *Greed* is considered to be von Stroheim's

masterpiece. It is understandably chaotic, with a number of unexpected changes of costume or setting. Strangely, nobody ever mentions some of von Stroheim's own lapses, but a few are evident. When McTeague (Gibson Gowland) throws a man off a cliff, the dummy that takes the fall is so floppy and lightweight that Ed Wood would have refused it. And after McTeague and Marcus (Jean Hersholt) fight in the desert, the "dead" Marcus continues panting and heaving from his exertions through a long scene.

Many writers insist that a third cinematographer, Ernest B. Schoedsack, worked on *Greed*. When we asked Schoedsack about this, however, his reply was, "Hell, no! I was in Persia making *Grass* all that year."

— George Turner



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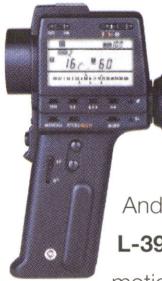
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